THE NEW-YORK

JOURNAL OF MEDICINE

FOR JANUARY, 1856.

PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. I.—*A Biographical Sketch of the late* T. ROMEYN BECK, M.D., LL.D. BY E. H. VAN DEUSEN, M.D., With a Steel Engraving.

INTIMATELY connected with the later history of nearly every department of scientific literature, in this State, is the name of Dr. Theodric Romeyn Beck. His family were of English descent, but so long settled at Schenectady, that by intermarriages there they had become incorporated with the Dutch inhabitants. In the probate of the will of his great-grandfather, proved at Albany, in 1733, he is described as "Caleb Beck, of the County of Albany, Gent., having, during his life and at the time of his death, goods, rights, and credits, in divers places in our provinces." His grandfather was admitted an attorney at law, to practice in all the courts at Albany, in the year 1751. His own father, who died very early, left his children to the care of his widow, the only daughter of the Rev. Derick Romeyn, D.D., then pastor of the Reformed Dutch Church at Schenectady, and well known as a Professor of Theology in that church.

The Romeyn family came from Holland and settled in New York about the middle of the seventeenth century; and among those of them who became distinguished may be

mentioned the Rev. John B. Romeyn, D.D., who died much lamented in New York, in the year 1825, and Dr. Nicholas Romayne, one of the founders, and first President of the College of Physicians and Surgeons of New York, and President of the New York State Medical Society in 1808–9–10–11.

Dr. T. R. Beck was born at Schenectady, New York, on the 11th day of August, 1791, and was the eldest of five sons, all gifted in no ordinary degree. By the death of his father, his early care and education, and that of his four brothers, devolved upon their widowed mother. In the brilliant future and distinguished usefulness of her youthful charge, we see the fruit of the piety, intelligence, and energy of this truly excellent woman; and as the reward of all her care, we find her, in advancing years, the honored mother of one of the most talented families in the State. Of these five sons, two died early—one a lawyer of great promise, at St. Louis, and another, Nicholas F., who deceased while holding the office of Adjutant General under De Witt Clinton. Of the surviving brothers, Dr. John B. Beck, the distinguished author and physician, was for many years Professor of Materia Medica in the College of Physicians and Surgeons of New York, and died in that city in 1851. The remaining brother, Lewis C. Beck, was no less eminent, and, at the time of his decease, two years since, was Professor of Chemistry in the Albany Medical College, and occupied the same chair in Rutgers College, New Jersey. To the general as well as professional reader the writings of both these brothers are well known, while the name of the latter is prominently associated with the preparation of the "Natural History of the State of New York," to which he contributed a valuable volume.

Dr. T. Romeyn Beck acquired the rudiments of his education in the Grammar School at Schenectady, under the more immediate supervision of his grandfather, and was graduated at Union College in 1807. Making choice of medicine as a profession, he soon after commenced his studies with Drs. McClelland and Low, at Albany; but, induced by

the superior advantages offered in the city of New York, he subsequently proceeded thither, and entered the office of Dr. David Hosack. He attended the lectures of the College of Physicians and Surgeons, then recently established, and received from that institution, in 1811, the degree of Doctor in Medicine, on which occasion he presented an inaugural thesis on the subject of Insanity.

This dissertation was immediately published, and received much merited attention. Although written at a time when but few in this country had devoted themselves particularly to the study of Insanity, it exhibits, on the part of its author, a full appreciation of the importance of the subject, and a very intimate acquaintance with its literature. It is now out of print, the limited edition published soon finding its way into the hands of permanent possessors. The pamphlet contains thirty-four closely printed pages, and is inscribed to his uncle, Dr. John B. Romeyn, and Dr. David Hosack, and presented to his early preceptors, Drs. Low and McClelland, "as the first-fruits of an education commenced under their care." After an introduction, with a brief detail of earlier investigations, and the various theories advanced by older writers to account for the phenomena of diseased mental action, follows a condensed history of the disease, its symptomatology, etiology, pathology, prognosis, and treatment. In subsequent pages the medical jurisprudence of insanity is considered, in reference both to the security of the public and the proper treatment of the patient.

This little volume, from the pen of "one whose opportunities of viewing the disease had been scanty, and whose information was derived principally from books," exhibits an intimate acquaintance with the literature of the subject, and the then only partially acknowledged wants of the insane, alike creditable to his character as a scholar and to his correct judgment,

Soon after his graduation he returned to the city of Albany, opened an office, and commenced the practice of his profession. His cultivated taste and studious habits soon brought

him into intimate relation with the scientific men of his day; and as early as 1813 we find his name upon the list of Counselors of the "Society for the Promotion of Useful Arts," in connection with that of De Witt Clinton and others equally eminent. This association at that time held a high rank in the scientific world, and had enrolled upon its list of membership some of the most honored names in the State. It was a re-incorporation of the old "Society for the Promotion of Agriculture, Arts, and Manufactures," first organized in 1791, after the expiration of its charter in 1804. Among his earlier and most successful efforts in this new and honorable field, is the annual address, delivered by appointment before the Society, at the Capitol, in the city of Albany, on the 3rd of February, 1813. This production was more particularly directed to the public, its object being the more perfect development of the mineral resources of our country, or, as is stated in the preface, to exhibit at one view the mineral riches of the United States, with their various application to the arts, and to demonstrate the practicability of the increase of different manufactures whose materials are derived from this source. It is well calculated to awaken an increased interest in this important matter, and was received with great favor throughout the Union.

His valued service in still another field, is beautifully acknowledged by Prof. Emmons. In dedicating the Fifth Volume of the Natural History of the State of New York to Dr. Beck, he remarks:

"There is more than one reason why the concluding divisions of the present work, undertaken to explore and illustrate the Natural History of the State of New York, and conducted under Legislative patronage, should be dedicated to you. You were among the first to foster the enterprise, and remained its consistent advocate in times when adverse circumstances seemed to jeopardize its continuance: much more than this, your whole life has been assiduously engaged in promoting the advance of science, and the spread of popular education; and the published results of your

scientific and literary labors, may be referred to as reflecting an honor upon your native State. Would, that the merits of the present volume were such as to render it more worthy its dedication."

In 1814, he married Harriet, daughter of James Caldwell, Esq., a well-known citizen of Albany, who died in 1823. He has left no son to inherit his name, and only two daughters.

In 1815, Dr. Beck was appointed Professor of the Institutes of Medicine, and Lecturer on Medical Jurisprudence, in the College of Physicians and Surgeons of the Western District of New York, an institution then in the third year of its existence. The proximity of the College to the city of Albany enabled him to discharge his professional duties, and, at the same time, retain his medical practice, which he continued to do for some time.

Notwithstanding his many arduous duties, his interest in the progress of scientific investigation seems to have been unabated, and, in the spring of 1819, he read before the Society for the Promotion of the Useful Arts a most elaborate paper on Alum, which will be found printed with the transactions of the Association. A short time previous, he found his strength unequal to the laborious duties of his profession ; and, on account of his apprehension of ill health, and, perhaps, in indulgence of his increasing taste for literary pursuits, he abandoned the general practice of medicine entirely, and, in 1817, was appointed Principal of the Albany Academy, an institution collegiate in character, and occupying a high literary standing. Teaching was especially adapted to his taste ; and under his enlightened management, for more than a quarter of a century, the Academy unvaryingly maintained a most elevated rank, among similar institutions. Dr. Beck continued a Professor at Fairfield until the College was dissolved, and, in 1841, became a Professor of Materia Medica in the Albany Medical College, the chair of Medical Jurisprudence being already filled. This professorship he resigned in 1853, and was then appointed Emeritus Professor.

In 1829, Dr. Beck was elected President of the Medical Society of the State of New York, and, at the meeting of the Society, at Albany, delivered the annual address, on the subject of "Medical Evidence." Continuing in office several years, he pronounced, on similar occasions subsequently, two addresses—one upon "Medical Improvements," and the other upon "Small Pox," all of which will be found in the volume of "Transactions" for the respective years.

Since 1851, he has filled the honorable situation of Secretary to the Board of Regents of the University of the State of New York; and, beside the multiplied duties connected with that position, has had devolving upon him, as *ex-officio* Secretary to the Trustees of the State Library, a large share of its management. The complete and well-arranged catalogue of the Library, and the interesting and comprehensive reports of the Board of Regents, bear the impress of his untiring application and devotion to the important interests over which that distinguished body presides.

Dr. Beck has always been a man of great and enlightened public spirit, ever ready to countenance and promote whatever tended to secure the highest interest of the community. This spirit and his natural benevolence have enlisted him ardently in the great public charities, either in their establishment and organization, or in the subsequent management of their affairs. His "Statistics of the Deaf and Dumb," read before the Medical Society of the State of New York, was the fruit of this philanthropy, and was most powerful in directing the attention of the public to the wants of this afflicted portion of the community.

Dr. Beck was appointed one of the Managers of the New York State Lunatic Asylum, by the act of its organization, in April, 1842; and has been re-appointed by the Governor and Senate, at the expiration of each successive tri-annual period until the present time. Upon the death of Mr. Munson, in the spring of 1854, he (although a non-resident member), was unanimously elected President of the Board. The institution has, at all times, had the advantage

of his wise counsels, efficient aid, and ardent devotion, and of his presence and immediate co-operation with his associates, whenever demanded by matters of unusual or special importance. Here, as well as in all other similar positions, he has ever consulted the highest and most enduring good of the interests committed to his charge, without regard to the prejudices or the more apparent benefits of the hour or the day, or any mere personal claims or advantages. His wisdom and experience, his independence, decision and energy, and his unflinching integrity, have made him a most valuable guardian of all the affairs of this great public charity.

It is, however, with Dr. Beck, as a writer, that we have at present especially to do, and we will close this sketch by a notice of his editorial connection with the *Journal of Insanity*, and his great work on Medical Jurisprudence.

In April, 1844, the first number of the *American Journal of Insanity* was issued from the press, occupying an entirely new field in the medical literature of this country. The generous motive which led Dr. Brigham, its founder and first editor, to assume, in addition to his onerous duties as Superintendent of a large asylum, the labor and responsibility of its establishment, is well known to most of our readers. To many of his colleagues and professional friends he was largely indebted for encouragement, in his undertaking, and for much valued and gratefully acknowledged assistance: among them, Dr. Beck, who, deeply interested in the attainment of the ends at which the Journal aimed, warmly seconded his efforts, and, amid many other engagements, found sufficient time to contribute frequently and ably to its pages. After Dr. Brigham's death, the Managers of the State Lunatic Asylum, aware of the importance to any specialty, of a periodical devoted to its advancement and interest, assumed the entire responsibility of its publication, and, by their unanimous request, induced Dr. Beck to edit the ensuing volume. He gave his consent, hoping at the close of the year to be relieved of a care which, with his other numerous duties, was a heavy tax; but, in the

absence of any other arrangement, he continued to conduct it until the close of the last volume, when "advancing years and more imperative duties" compelled him to relinquish his editorial connection.

In the theme of his inaugural dissertation at the Medical College, and in the subject of many of his literary efforts, we perceive how early and closely his attention has been drawn to insanity and its legal relations. From a knowledge of his character, it is very natural to suppose that this interest was awakened, not only by the intrinsic merit of the subject, but, also, by the then very general feeling that this department of medical literature was indeed most barren. How well he succeeded in his effort to supply this deficiency is evidenced by the multiplied editions of his *Medical Jurisprudence*, which have already been called for. Since its first issue from the press, in 1823, in two large octavo volumes, of nearly two thousand pages, it has passed through five American, one German, and four London editions. The favorable reception of this work in foreign countries, at a time when national feeling in the medical world was stronger than at any previous or subsequent period, shows how completely its merits disarmed every prejudice. Says a bibliographer, in a notice of the German edition: "Among the numerous and unequivocal evidences of the very high estimation in which Dr. Beck's *Elements of Medical Jurisprudence* are held by the profession in Europe, their translation into the German language must be regarded as the most flattering and decisive indication of their true value. In no country has this interesting and varied science been prosecuted with such unabated zeal, or have so much research and learning been elicited on its several curious topics, as in Germany. From the time of Zacchias, indeed, to the present day, it has been the favorite object of study with German physicians, and their opinions of the merits of any treatise on the subject are, therefore, entitled to the highest weight and the most respectful consideration. Proud are we, therefore, to see them prize the performance of our learned countryman so

highly as to deem it worthy of transfusion into their vernacular tongue. In his native language his work is as yet without a parallel."

His labors in this field did not cease with the publication of his great work, but, for many years afterward, besides the emendation and supervision of subsequent editions, he contributed largely upon the same subject to various medical periodicals. A distinguished writer, in reviewing a copy of the tenth edition, for Hays' *American Journal of Medical Science*, remarks: "The pages of this Journal, for years past, have borne constant evidence of the untiring and invaluable research of Dr. Beck, whose observations and extracts from foreign and domestic sources have filled that portion of it devoted to medical jurisprudence; and the writer of the present notice bears his testimony to the same effect; for, having taken much interest in the subject, and consequently had occasion to examine the journals, he found it impossible to furnish a single novelty to this department in which he had not been anticipated by Dr. Beck." In both the medical and legal periodicals of the day there have, from time to time, with successive editions of his work, appeared many and varied notices and reviews—flattering evidence of its merit, and the high estimation of both professions. From some of these it would give us pleasure to extract; but the work has already received the stamp of worth, has taken its place as high authority, and acquired for itself and its author a most extended reputation.

The greater portion of the preceding sketch of Dr. Beck's professional life was prepared for the *American Journal of Insanity*, on the occasion of his retirement from the more active discharge of public duties connected with the specialty to which that periodical is devoted. Thus restricted, it is necessarily, as a biography, incomplete. In other departments of science, his investigations have been no less extended, and to other schemes of benevolence, he has as generously devoted his energies and rare practical attain-

ments; and though these services, so valuable and so widely appreciated, may not be enumerated here, they have found a far more enduring record than these pages could afford.

To Dr. Beck was allowed the gratification of witnessing, in a measure at least, the attainment of the important ends at which his labors aimed, and the consummation of many of the projects to which he had looked forward with happy anticipations.

He has lived to see the claims of the deaf-mute, so ably urged by himself, and so warmly advocated by his friend, the lamented Gallaudet, recognized in almost every State of the Union; and the institution of New York bearing a high reputation as one of the most successful schools for deaf-mute instruction in the world. He has witnessed the adoption in this State, of a public system of education, elementary and collegiate, alike thorough and successful; and as the crowning effort in the field of his severest, yet most congenial, labor, a "State Library" which, for completeness of organization and beauty of arrangement, stands unrivaled, and for which, it may be remarked, the State of New York is almost entirely indebted to his extended and complete knowledge of the history of Literature and Science, in which he had no equal in this country, if indeed anywhere.

He has had the satisfaction of seeing the *American Journal of Insanity*, a periodical in the success of which he was so much interested, firmly established, and gradually extending its field of influence and usefulness. The State Lunatic Asylum, at Utica, an institution with which he has been officially connected since its organization, and over whose interests he has so ably presided, has attained a rank among similar institutions alike creditable to its judicious management and the State; and his untiring devotion to the study of Medical Jurisprudence, has enabled the profession in America to point with pride to an American author, at the head of the literature of one of the most important departments of medical science.

Dr. Beck's constitution, naturally strong and vigorous, at

length yielded to this long-continued and unremitting mental toil, and, during the spring of 1854, he himself became conscious of failing strength, and, at the earnest solicitation of his friends, was induced to restrict the circle of his labors. The summer of 1855 was spent at Lake George, in the hope that entire freedom from care, might recruit his impaired health. Of his last illness, little is to be said. Paroxysms of dyspnœa, with nausea and other distressing symptoms, from which he occasionally suffered, had been attributed to an organic affection of the heart. Physical examination, however, failed to confirm this diagnosis, and from the later history of his disease and the absence of important pathological lesion, as subsequently ascertained, it would seem that his death was the result simply of exhaustion. Thus, on the 19th of November, 1855, in the sixty-fifth year of his age, the last member of this talented family ceased from his labors.

Actuated by the highest motives, Dr. Beck has been an untiring laborer in every field of science and philanthropy, and most truly may it be said of him, that he was one of those, "in whose death mankind has lost a friend." His life was one of great practical usefulness, and such, as every good and wise man, in advancing years, would desire to look back upon; and he has left behind him a name, around which cluster more delightful and enduring recollections, than the crumbling honors, for which ambition toils, could ever have afforded.

ART. II.—*Amputation at the Knee Joint, Illustrated by the Cases which have occurred in American practice, and mainly by those which have been treated in the New York Hospital.* By THOMAS M. MARKOE, M.D., Attending Surgeon.

THERE is a certain number of injuries and diseases of the lower extremity, requiring amputation, in which it would be desirable, if there were no valid objections to such a procedure, to remove the member at the knee joint, rather than

through the thigh. There are, for example, compound fractures so high up on the tibia, as to preclude amputation at the usual point in the leg, yet, where there would be sufficient flap for a disarticulation of the knee. There are cases where necrosis has so disorganized the tibia, that it must be removed entire; and cases where cancerous disease of the same bone makes it proper not to leave any portion of it behind, in which an amputation through the knee joint, if it were a justifiable operation, would satisfy all the laws of good surgery, as far as removal of the entire disease, and operating through sound parts, is concerned.

I believe, however, that on presentation of such a case, nine-tenths of the surgeons of the present day would proceed, at once, to amputation through the thigh, without bestowing a moment's consideration upon the operation at the joint; or, if such consideration should be entertained, it would only be to dismiss the thought, as involving a procedure at once unwise, unsafe, and unsurgical.

This pre-judgment and pre-decision of this important surgical question, I am disposed to consider as unsupported by sound reason, and entirely unwarranted as a deduction from the facts which are already before the profession, and as demanding from us a reconsideration, at least, as candid and impartial, as the former verdict was sweeping and indiscriminating.

I confess myself to be a partisan and an advocate for amputation at the knee joint; and I became so in the year 1841, on examining, at the New York Hospital, a stump left after this operation. The integument covering the condyles was sound, and free from callosities, excoriations, or tenderness; and with this surface applied upon a cushion, in an ordinary wooden leg, he could walk without inconvenience, ten miles a-day, and had been able to do so ever since the stump was healed, some years before. The performances of this stump were seen and admired by a number of gentlemen, who happened to visit the hospital at that time, the patient remaining there some weeks, I think,

for a syphilitic disorder; and the impression made upon my own mind, when comparing it with the useless, tender, pointed cones of flesh, left by the ordinary amputation through the thigh, was a desire to ascertain whether such an inestimable advantage might not in certain cases, with safety and propriety, be secured to our patients. During the fifteen years that have elapsed, I have never lost sight of this inquiry, and, after some considerable opportunities of observation, I still feel strongly inclined to the opinion that, in its appropriate case, amputation at the knee joint is, for many reasons, to be preferred, before amputation through the thigh.

My attention and interest in this subject have been again more particularly awakened by the occurrence of the two following cases, which have recently presented themselves. They are the only two instances in which I have myself operated, though I have watched with care the progress of all the cases that have occurred in the New York Hospital, now nine in number.

Case 1.—Anna M. H., a stout, healthy child, two years and three months old, was knocked down and run over by a car on the Third Avenue Railroad, May 18th, 1855. I saw her within an hour after the accident, and found her lying partially stupid, seemingly asleep, but easily roused to pretty loud demonstrations of pain, when moved or touched rudely. The surface was pale and cool, particularly the extremities. She was very restless at intervals, with a pulse which was rapid and feeble, but varying very much in its force, so much so, that at times I feared death was about take place from the direct shock of injury. On examining the limbs, it was evident that the car wheel had passed over one, perhaps both legs. The right was crushed, from just below the knee, into a shapeless mass. The left was obliquely lacerated across its anterior surface, by a wound six inches long, which, in so small a limb, was nearly its whole length; the bones of this leg, however, had happily escaped injury. The accident occurred about three o'clock in the afternoon.

She was carefully removed to her father's house, which was just opposite where the accident occurred, and some weak wine and water was given her, with one drop of laudanum every half hour. She was covered warmly with blankets; the wounds, for the time being, were merely dressed loosely with wet towels. There was, and had been, no considerable loss of blood.

By eight o'clock of the same evening, reaction had occurred, and seemed fully sustained; the pulse having become steady, the surface warm, the lips more red, and she more sensible, and complaining more of the pain of her wounds. She had taken four drops of laudanum. In consultation with Dr. Gurdon Buck and Dr. Horsfield, it was deemed safe to proceed to the removal of the limb. The injuries to the bone, and the lacerations of the soft parts, approached so near the head of the tibia, that there was no room for amputation at the usual situation, and the only choice lay between an operation through the thigh or through the knee joint. The latter was determined upon. I made a long anterior flap, in which I was obliged to include some of the original lacerations, and a short posterior one. The anterior flap, and the opening of the joint, was done with a scalpel; and the posterior flap, which, of course, included a little of the upper part of the gastrocnemius muscle, was made with a catlin. In trying to avoid unnecessary exposure of the synovial surface to the air, I cut very close to the head of the tibia in opening the joint, and left the interarticular cartilages attached to the articular face of the femur. They were, however, easily removed with the scissors. The patella was not touched, nor was the cartilage of incrustation removed. Very few vessels required ligature; none whatever, in the anterior flap. The wound was brought together with stitches closely placed, and the flaps were found to fit well, without tension. The stump was dressed lightly with wet lint and a bandage. The laceration of the right leg was sewed up at wide intervals, to sustain the lacerated flaps in place, and a wet towel was wrapped round it as a bandage. The operation was

done under the influence of ether. Three more drops of laudanum were given through the night, with wine and water; and, towards morning, she partook freely of milk and water. During the next two days the primary effects of the injury rapidly disappeared; she became bright and natural in her appearance, and took, tolerably well, her usual food. She did not seem to suffer much pain from her wounds, except when they were touched; and it was noticed that, though she shrank very much from the least handling of the stump, yet she herself would move it about in all directions, and without any apparent inconvenience.

The stump was dressed on the 25th, seven days after the operation. It looked very well, a good deal of union had taken place, very little suppuration, no inflammation. The wound of right leg is cleaning off, with slight superficial sloughing. Her general condition is good, and though the appetite is rather poor and she looks a little pale, yet she is bright and lively, and suffers no pain worth mentioning. The further progress of the cure was very satisfactory and without accident. The last ligature did not come away till June 28th, when the stump had been some time healed. The lacerated wound on the right leg also healed favorably. The cicatrix on the face of the stump is well behind, and mostly out of the way of direct pressure. The stump is free from tenderness, and appears to be perfectly sound. She has begun to walk a little on an artificial leg, and she bears her weight on a cushion on the end of the stump, without difficulty or pain; and in crawling about the floor or in climbing, she uses the stump to support herself just as readily and as easily as she does the sound knee.

Case 2.—The second case occurred in the person of a stout Irish laborer, a brakeman on the Erie Railroad. He was twenty-two years of age, and apparently a healthy man, though he did not claim that his habits were strictly temperate. He was in the act of stepping on the platform of the engine, which was backing at the moment, when his foot slipped, and he fell with his right leg thrust through be-

tween the spokes of the driving wheel, in which position the wheel must have made several revolutions, crushing his leg between it and the side of the engine. This was in the afternoon of the 5th of November, 1855, and the next day he was brought down to the Hospital. The limb was so completely disorganized, that amputation was evidently the only resource left us. The injuries of the bones and muscles extended too high for us to think of attempting to operate through the leg, but, on a careful consultation, it was deemed safe to operate at the joint, inasmuch as the integuments both behind and before, seemed sound for three or four inches below the lower end of the patella. The operation was accordingly done at the joint, the procedure being precisely that described in the former case, leaving a long anterior and a short posterior flap. The small portion of the gastrocnemius muscle, which was left by the catlin in the posterior flap, was removed as close to its origin as could be conveniently reached. A small V shaped portion of the anterior flap, which seemed severely contused, was also trimmed out. Only five vessels required ligature, and these were all so closely grouped together round the popliteal artery, that they were all contained within a space as large as a shilling piece. No vessel in the anterior flap required a ligature. Instead of carrying the ligatures over the face of the condyles, and out of the wound, in the usual manner, a small cut was made by the scalpel in the posterior flap just opposite the tied vessels, and all the threads were brought out behind together, leaving the face of the stump without any threads crossing it. The flaps were here and there infiltrated with coagulated blood, but otherwise seemed free from injury. The edges of the wound were brought together with stitches closely placed, and dressed with cloths dipped in tepid water. No adhesive strips nor bandages were applied. The patient's general condition was favorable. A large anodyne was administered after the operation.

Nov. 7. Passed a tolerably comfortable night. Considerable feverish reaction has already commenced. The stump

looks well, some bloody water and air accumulated between the flaps. This was let out by removing a stitch.

Nov. 8. A good deal of inflammation about the stump, with swelling on each side of the patella. Fever high. Ten leeches were put on around the patella, and poultices applied. From this point the inflammation rapidly subsided, and the fever abated. By the end of the week, all morbid tenderness had subsided, and the swelling had disappeared, as suppuration was established. The stitches were removed on the fourth day. Union had taken place along half the wound, the other half gaped slightly. He was able by the end of the week to hold up his stump himself to be dressed. On the eleventh day, he was sitting up in bed of his own accord. About this time we observed that at the bottom of the wound, where the flaps were a little drawn apart by retraction, there was exposed to view about three-fourths of an inch square of the cartilaginous covering of the outer condyle; at first it looked white, and shining, like healthy cartilage, but, gradually, the peripheral portion became converted into a soft, pultaceous layer of a grayish color, looking like soaked, greasy leather. This change spread in about a week over the whole exposed surface, and in this soft substance granulations rapidly sprung up, which soon converted it into a florid suppurating surface. The exposed cartilage all underwent this change, except a small piece, about as large as a three-cent piece, where the transformation seemed to go on under it, and between it and the bone, so that it was detached in a thin layer unchanged. This process was completed about the twenty-second day. The ligatures had all come away by the nineteenth day. On removing the loose sequestrum of cartilage on the twenty-fifth day, it was found to be connected with a larger piece remaining under the anterior edge of the wound. The whole was as large as a shilling piece, and came away easily, leaving a healthy granulating surface beneath. A small abscess formed on the face of the stump, which was opened.

Dec. 13. The wounds are all filled up and rapidly cicatriz-

ing. The patient sits up out of bed, and bids fair to be well in much less than the average period of cure in amputation of the thigh.

In addition to the three cases above alluded to, the following cases have occurred in the practice of my colleagues in the New York Hospital:

Case. 4.—Ellen Callighan, æt. 35. Was received into the house for severe burns, involving so much of the leg and reaching so near, say within two inches of the knee joint, that the only question presented was whether to amputate at the knee or through the lower part of the thigh. The operation was done at the knee joint by Dr. Jno. Kearney Rodgers, on the 9th of February, 1846, on the fourteenth day after the accident occurred. He made a circular incision, saving all the integument which was uninjured. The patella was not removed. On removing the leg it was found that the flap was not nearly sufficient to cover the condyles, and an incision was therefore made through the integuments across the anterior surface of the thigh, about a hand's breadth above the joint. This allowed the integument to slide down and to cover the end of the femur, but not without a great deal of tension on the flaps. The first dressing took place on the 15th. No union. The flaps gaping three inches apart, exposing the surface of the condyles, a portion of the anterior flaps sloughing. Profuse suppuration set in, with great constitutional irritation which gradually increased in spite of tonics and stimulants and the most liberal allowance of good food; cough and free expectoration gradually came on; and though, about the first of March, both the stump and her general condition improved for a few days, yet the rallying proved only temporary, and she died, worn out by irritation and exhaustion, March 7th, about one month from the time of the operation.

Case 5.—Thomas Henry, æt. 21, an Irish laborer, was brought to the Hospital, Oct. 18, 1848, with an injury of his leg so severe as to leave no question as to the necessity of amputation. The injury had occurred twelve hours before,

by the passage of one of the Erie Railroad cars over his limb. Having been brought so long a distance to the city, he was, on his arrival, very much prostrated, with cold skin, small pulse, and occasional vomiting. Reaction having in some measure been brought about by the use of stimulants, the limb was amputated the next day by Dr. Rodgers at the knee joint, there not being enough integument left to allow of an operation lower down. The flaps were made with a scalpel, and were anterior and posterior, and mainly of integument. There was but little hæmorrhage. Reaction seemed to flag after the operation, his pulse becoming more rapid and very feeble. On the 21st he was evidently failing. He had become very restless, pulse weak and fluttering. Vomits all his drinks. On the 22nd he died, apparently from the primary shock of injury, aggravated by a long journey.

Case 6.—Daniel Bilby, æt. 36, was admitted Dec. 19, 1850, with syphilitic disease of the bones of the leg, accompanied with gangrene of the soft parts. His limb was amputated at the knee joint, Jan. 21st, and he died on the 29th, from the progress of the disease. The details cannot be further given, as the record of the case was by some accident omitted in the Hospital register.

Case 7.—John Kelly, æt. 39, an Irish laborer, was brought into the Hospital, Sept. 7th, 1853, with his right leg crushed by the fall upon it of a log of mahogany. The blow was received in such a manner as to crush the tibia and its covering, leaving the fibula unbroken. On his admission, a few hours after the receipt of the injury, his general condition was fair, pulse ninety-two, with a good warm skin. Amputation was proposed to him, but he obstinately refused to have anything done until next day, Sept. 8. His general condition had fallen off in the interval, pulse 118, surface disposed to be cool, and tongue furred. The limb was, however, taken off at the knee joint, as giving him, even under unfavorable circumstances, the best chance for his life. The flaps were made as liberal as the lacerations would allow, but were found to be too short and the ends

of the condyles were trimmed off. This allowed of their being brought together. The wound was dressed as usual, and a bandage was placed on the thigh from above downwards, to compress the muscles. On his recovery from the effects of ether, he remained very restless and wandering, trying often to get up out of bed. He was, and had been, on a full stimulant course of regimen. He suffered great pain in the stump, which was relieved by removing the thigh bandage. He had a bad night of restlessness, and delirium, though he seemed somewhat better the day after the operation with a pulse at eighty, somewhat fuller than the day before. Rather suddenly, at noon on the 10th, rapid failing of the pulse came on, and he died forty-eight hours after the operation. The case was under the care of Dr. Watson.

Case 8.—Michael Rooney, æt. 50, was admitted February 18th, 1852, with a badly crushed leg, which had been caused by a railroad car passing over the limb, about eleven hours previous to his admission. The injury was so great, and so near the knee joint, that amputation was performed at the joint by Dr. Buck. A small anterior, and a large posterior flap were made, the patella being left, and the wound dressed in the usual manner. As the patient had been brought from Piermont, and the depression consequent upon his injury, had not entirely passed away, no anæsthetic was used. Reaction came on more decidedly after the operation, and everything went on favorably. Pain was moderate. Tolerable rest at night, with moderate general excitement. On the 19th, the stump was hot and tender, with a good deal of fluid discharging from it. Six leeches were applied. On the 20th, the stump was dressed, and union was found to have taken place for about one-half the extent of the wound. Discharge moderate. From this time he improved slowly, but steadily, until in the early part of March, a diarrhœa set in, which continued nearly a month, keeping him reduced and feeble. On the 20th March, burrowing of pus had taken place among the muscles of the thigh, which found its way out through the stump, causing a profuse discharge. System-

atic compression along the track of the abscesses, with a generous diet and moderate stimulation, gradually brought about an improvement. The abscesses contracted, the wound slowly cicatrized, the discharge diminished, and, at the same time, the diarrhœa was controlled, and his general condition steadily ameliorated. It was not till the middle of May that he was able to leave his bed, and not till the first of July that the stump was solidly healed. Several months after leaving the Hospital, he was seen, and his condition ascertained as follows:—His general health was good; his stump was sound, and sustained direct pressure on a peg leg, without pain or uneasiness; he was able to follow his former occupation of mixing mortar for the masons.

Case 9.—Jno. McAuliff, æt. 13, was admitted to the Hospital, April 30, 1852, with his right leg severely crushed, by two bars of railroad iron falling upon it, a short time before he came in. The patient's general condition being favorable, the limb was amputated by Dr. Buck, at the knee joint, about four hours after admission. The flaps were made anterior and posterior, and the ends of the condyles were sawed off, and the cartilage removed, by paring, as far as possible, from the articular extremity of the femur. The edges came together without tension, and the wound was dressed in the usual manner. Slight feverish reaction followed the operation, with some swelling and heat about the stump. About ten days after the operation, matter was found over the external condyle, and let out. He improved from this time, the stump healing slowly. About the first of June, he had an attack of fever, with much discharge from the stump. July 12th. The discharge has all ceased. Aug. 7th. The wounds are healed. Aug. 18th. He was discharged, cured. He has been lost sight of since leaving the house, and no account can, therefore, be given of the degree of use he can make of his stump.

Case 10.—Adolphus Bullenburg, æt. 34, a Prussian, was brought into the Hospital, August 7th, 1855, having been injured about five hours before, by being run over by some

railroad cars. There was found a comminuted fracture of the left arm, a little above its middle, and a severe compound comminuted fracture of the right leg. The injury of the leg was so severe, and so near the knee joint, that the only choice lay between amputation above, or through, the joint. The latter was performed by Dr. Halsted, making a large anterior, and a smaller posterior flap. Very few vessels required ligature, and those which did, were so close together, that all of the threads were brought out through a small cut in the posterior flap; so that, when the edges of the wound were brought together, there were no threads between them, to interfere with union. His general condition was pretty good, as far as regarded any prostration from injury, but it was ascertained that he was, at the time of the operation, and had been for some days previous, suffering from delirium tremens. This very unfavorable complication continued after the operation, with aggravated severity. In fact, he showed no sign of amendment at any moment. He continued in an agitated, semi-comatose delirium, sinking gradually, in spite of opium, stimulants, and nourishment, until the 11th, when he died, apparently worn out by his constant convulsive movements. No special appearances were noted about the stump, though the fractured arm had, from his constant movements, become ecchymosed and enormously swollen.

Dr. I. Moses, formerly house-surgeon of the New York Hospital, now of the medical staff of the U. S. Army, reported before the Pathological Society, at its meeting, June 23rd, 1855;—

Case 11.—Jesus Senno, a Mexican, æt. 26 years, received a gunshot wound of the left leg, fracturing the tibia, in June, 1854. He was seen by Dr. Moses, November 22nd, who found the whole leg much swollen and hard, skin rough and scaly. Along the whole course of the tibia, the skin was thin, with numerous openings, discharging a greenish, unhealthy matter, the probe everywhere indicating dead bone. His health was feeble, and he was suffering from an

attack of intermittent fever. He was conveyed to the Hospital, and placed upon quinine and good diet. By this means, his condition was improved, and Dr. Moses determined to remove the limb. As there was no disease about the joint, and as he thought there was sufficient healthy tissue to make a posterior flap, he selected the section at the knee joint. The disarticulation was effected in less time than is required in the ordinary operation in the continuity. Hoin's method was adopted. After making the flap, it was found hard, fibrous, and degenerated into a substance resembling cancerous matter. It was necessary to dissect off this substance, before the flap could be made to cover the stump. The articular surface of the femur was perfectly healthy, and both it and the patella were left untouched. The flap fitted well, and was secured by stitches and adhesive plaster. After the operation, stimulants and quinine were freely administered. The stump was dressed December 1, and presented a healthy and beautiful appearance. No untoward circumstance occurred to impede his recovery, and on the 4th of January, about six weeks after the operation, he left the Hospital with the wound entirely healed, and the stump so firm and painless, that he rode home on horseback.

Dr. Stephen Smith, in the No. of this Journal for November, 1852, has presented in connection with a very interesting case of knee-joint amputation, performed by Professor Willard Parker, a complete outline of all the well-authenticated experience, on this subject, of all the surgeons of Europe, and of our own country. To this paper, which forms one of an admirable series of contributions to statistical surgery, I am indebted for the following additional cases, in which the amputation in question has been performed in this country.

Case 12.—John McNiell, æt. 25 years, a native of New York, of good health and habits, presented himself to Dr. Parker, on the 7th April, 1852, with an atrophied and deformed limb, the result of an attack of scarlet fever, at four years of age. The patient's wish was to have his paralyzed

and useless limb made more serviceable by amputation, and the substitution of an artificial leg. The case appearing to be a favorable one for amputation at the knee joint, this operation was performed, by making a short anterior, and a long posterior, flap. The patella was dissected from its attachments and removed. Five ligatures only were required, and the stump was dressed in the usual manner. The case progressed favorably for several days, when, on the fifth day, slight hæmorrhage occurred from the stump. It recurred on the sixth day, when it was necessary to open the wound, and tie two cutaneous vessels. During the next five days, everything went on well; but hæmorrhage again returned on the eleventh, twelfth, and thirteenth days, when a ligature was placed round the femoral artery. This arrested the bleeding, and everything again went on favorably, till the twentieth day, when hæmorrhage again came on so freely, that it was thought best to re-amputate, which was accordingly done through the lower part of the thigh. The recovery from this second amputation was favorable.

Case 13.—This case is mentioned without detail in Dr. Smith's collection, as a man from the South, on whom amputation at the knee joint was performed, on account of a gunshot wound, and the point of operation was selected, because the surgeon had no other instrument than a razor, with which to operate. He presented himself at the college clinique. The stump was a perfect specimen of its kind, but he acknowledged that it was tender on pressure, to a manufacturer to whom he applied for a wooden limb.

Case 14.—A colored man, under the care of Dr. Sabine, one of the consulting surgeons of the Colored Home of this city, had gangrene of the leg, after ligature of the femoral artery for popliteal aneurism. The sloughing progressed, first separating the foot from the leg, and then extending to the knee, where disarticulation was nearly effected, when the knife was resorted to and the exsection completed. The end of the femur was but poorly covered, but the wound healed, nevertheless, in due time, leaving a stump which had

the appearance of being sound and well-conditioned in every respect. No trial of its efficiency was made, as the patient died of phthisis, six months after losing his limb.

The fourteen cases, thus far given, have occurred in the practice of the surgeons of New York, and all of them but three have been performed in this city. The following are also on record, as performed by American surgeons.

Case 15.—Dr. Nathan Smith, of New Haven, was the first person, who in this country performed the exarticulation of the leg at the knee joint. This case was one of a Miss R. D., who had a disease of the bones and soft parts of the leg, so extensive as to require removal of the whole tibia. The thigh being sound, the amputation was done at the knee joint, with anterior and posterior flaps of equal length. The patient recovered without the occurrence of anything unpleasant. The operation was performed in April, 1824.

Case 16.—M. L. Blaquire states, that while in Mexico in 1833, he amputated, at the knee, the right leg of an Indian, in whom sphacelus had occurred from the application of hot bricks during the cold stage of cholera. He expresses himself as well-satisfied with the operation, for though the ruff of integuments, intended as a flap to the condyles, sloughed away, and the cartilage exfoliated, yet the wound healed, and the patient had a very serviceable stump.

Case 17.—Professor Pancoast, in 1841, removed the leg of Rachel Morris at the knee joint, in the Pennsylvania Hospital, for necrosis of the entire shaft of the tibia. He operated by making two posterior and one anterior flap, or as it might be better described, an anterior and posterior flap of nearly equal size, with the posterior flap split up along the middle of the popliteal space, a proceeding probably suggested by the irregularities of the healthy integument, left below the joint. The cicatrization was complete in four weeks, and was unattended by a single bad sympton. From the shortness of the flap one of the condyles became exposed, and the changes in the articular cartilage could be observed. Dr. P. says : " This structure neither reddened nor became pain-

ful, so as to exhibit any coating of synovial membrane, or other appearance of organization. It became by the end of a week softened and pulpy, on its free surface, in the same manner as occurs when the joint is subjected to the macerating tub of the anatomist. The pulpy lamina, which was so soft as to leave a track when rubbed with the end of a probe, was insensibly removed with the discharges, by a continuation of the same process of softening and removal; the thin lamina of bone, covering the articular face of the condyles, was completely bared of cartilage, in the third week. This lamina first presented a dark gray aspect; some small gray conical elevations, soon after, made their appearance on its surface, and shortly grew into florid healthy granulations, to which, and to other granulations which sprang from ends of the conical ligaments, the cutaneous flaps were ultimately firmly united. No appearance of synovial inflammation of the bursa about the joint, was manifested during the treatment, and the patella remained moveable on the upper anterior surface of the condyles. The line of cicatrization was drawn backwards, by the hamstring tendons, so as to be opposite the notch, between the condyles; and the patient now preserves a useful limb, with which she moves about with great ease and facility, by applying a healthy surface of skin covering the condyles, upon a hair cushion at the top of the ordinary wooden leg."

Case 18.—Dr. Catley, of Delaware, reports the following case:—Mr. Schmel, æt. 33, about thirteen years previous to the time of the report, received a severe lacerated wound of the popliteal space, involving the artery. It occurred in a fall from his horse, the animal stepping on him while prostrate. The effect of this injury, aided by a tight bandage applied to stop hæmorrhage, was to cause mortification of the leg up to the knee. The operation of disarticulation at the knee joint was performed. The soft parts, however, sloughed about two inches higher up, leaving the bone nearly naked. This, in time, was mostly covered by an imperfect cicatrix, which, however, never became sound, though during about twelve

years he was able to perform some labor. The stump becoming, during the last year previous to the report, more troublesome, and the cicatrix assuming the character of a bleeding fungus, amputation through the thigh was resorted to, and the patient had a fortunate and complete recovery.

In studying the history and watching the progress of these cases, ten of which have come under my immediate observation, the following considerations have presented themselves to my mind, as favorable points of comparison between this operation, and that through the continuity of the femur :—

1.—The crowning advantage of an amputation through the knee joint, over an amputation through the femur, and the consideration to which all the others are subordinate, and from which they derive their main importance, is, that the stump left, by the former operation, is a useful one, while that left by the latter is a useless one, for any purposes of progression. Those who have not been in the habit of observing the adaptation and working of artificial limbs, may not be aware that in the stump left after amputation through the thigh, no pressure can ever be borne upon its extremity, be the bone ever so well covered by soft parts. The extremity of the bone is so small, that any pressure upon it, sufficient to assist in sustaining the weight of the body, would soon be followed by ulceration, and protrusion through the cicatrix. In these cases, the artificial limb is so arranged, that the support of the body takes place at the hip, by bands passing round under the tuberosity of the ischium, and round the throchanter ; so that, in fact, the patient sits in a sort of cushioned ring, carefully adapted to fit these two bony prominences, while the stump of the femur is received into a conical opening of the artificial thigh, and is only used to direct the forward movements of the limb, and to steady the apparatus, which is bound to it laterally, as firmly as it will bear. It is evident, therefore, that in this apparatus, the patient walks, as Velpeau remarks, as if he had an anchylosis of the hip-joint, all his motions being made by the pelvis, and not at the coxo-femoral articulation.

This mode of progression, as may be conceived, is not only exceedingly awkward and ungainly, but so laborious, that very few persons have strength enough to walk, under these circumstances, with any freedom, or to any great distance. These remarks apply to those who have the means of commanding an artificial limb of the best construction; but, to the laboring man, amputation through the thigh is an absolute and inevitable condemnation to the crutch for life. On the other hand, the stump left after amputation at the knee, if it be a good one, is perfectly capable of sustaining the pressure of the body, on a simple cushion. This fact is so fully demonstrated by the cases published, both here and abroad, that I need only allude to it as an ascertained thing, that in the majority of cases, the amputation at the knee leaves a stump upon which the patient, with the help of a wooden leg, can walk as well as when the limb is amputated below the knee. To the poor man, this single circumstance makes all the difference, between his being able to earn his living by active employment, and his being laid by for life, a hopeless cripple. To the rich man, who is able to secure the aid of an artificial limb, it makes the difference, between a point of support at the knee, and a point of support at the ischium; in fact, it is practically the difference between amputation below, and amputation above, the knee. In conversation with Messrs. Palmer & Co., I was informed that their expressed objections to an amputation at the knee joint were founded on the supposition, that the end of the stump could not be used as a point of support. This objection being removed, they acknowledge that the knee-joint operation presents the advantages alluded to.

2.—The operation at the knee, is farther from the trunk than that through the thigh, and is, therefore, probably attended with less constitutional shock or depression. I say, probably, because this is not a fact which is positively proved by statistical deduction; but, at the same time, it is so entirely in accordance with analogy, and so consonant with the opinion and practice of surgeons, in other cases, that it

may safely be taken for granted till disproved. I would, myself, be disposed to go further, and say, that from the nature of the parts cut in the two cases, the thigh operation, where enormous surfaces of muscular tissue are divided by the knife, would be much more depressing to the powers of life, than the knee operation, where almost nothing but integument is involved in the incisions,—a consideration which might be of moment in a case where, from shock of injury, or from hæmorrhage, the reactive forces were so reduced, that a single ounce of blood, or a single degree of further depression, might fearfully compromise the favorable issue.

3.—The section at the knee joint is, in reality, less extensive than in amputation higher up. No parts are cut but the integuments, and though a large surface is exposed when the flaps are complete, it must be remembered that a great portion of that surface consists of the cartilaginous covering of the femur, a natural, not a wounded surface, and whatever inflammatory changes we might *a priori* fear would take place in it, yet experience thus far clearly shows, that this surface plays almost a perfectly passive part in the earlier processes, finally accommodating itself to the adhesive reparative actions, in a manner which is not entirely interrupted under the most unfavorable circumstances of exposure and suppuration.

4.—In the operation we are advocating, no muscular interspaces are exposed by the knife, excepting those of the heads of the gastrocnemius, which muscle being divided near its origin, are of small extent and depth. There is, therefore, less chance of suppurative inflammation traveling upwards, in case such inflammation attacks the surface of the stump; for it is a well-known fact, that it is along these interspaces, and among their soft areolar tissue, that abscess is most apt to burrow up the thigh, when the operation is done by section through the bellies of these muscles. The muscles moving the leg upon the thigh are, it is true, divided; but it will be observed, that the quadriceps extensor is divided through the

ligamentum patellæ, and the flexors, as well as the gracilis and sartorius, are cut at their tendinous portions, and immediately retract in their sheaths, so as to be entirely out of the way; and it is well known, that a clean cut of healthy tendon is almost never followed by any but the simplest and most healthy reparative action.

5.—The operation at the knee joint requires fewer ligatures than amputation of the thigh, and these few consisting usually of the popliteal, the two sural, and the two inferior articular arteries, are cut in such a manner, that their orifices are all close together in the centre of the popliteal space. By making, therefore, a small opening through the integument, of which alone the posterior flap consists, we are enabled to bring all the threads out of the stump, by a short and direct route, in the most depending position, and thus the space between the flaps and the condyles, where we are most anxious to procure adhesive inflammation, is not fretted into suppuration, by the presence of the ligatures crossing it, to be brought out between the lips of the wound.* This procedure, it will be noticed, was adopted in several of the cases. In several instances, no vessel in the anterior flap required ligature, thus leaving the posterior leash of ligatures the only ones in the stump.

6.—In the knee-joint operation, the muscular attachments, which are concerned in the movements of the limb, are not divided. Those which are severed are merely for the movements of the leg, all the muscles proper of the thigh being left untouched. A singular circumstance results from this, viz.: that the patient is able to move the stump with a freedom and facility which is astonishing. I have already alluded to this, in the case of the little child on whom I operated, and the same thing was strikingly noticeable in my second patient,—case No. 3,—so much so that, within a week after the operation, even before the first inflammation had subsided, he was able, with ease, to lift up, and hold up, his

* This method of bringing out the ligatures through the posterior flap was first suggested and adopted by M. Blandin.

stump, without assistance, to be dressed. From this, also, it happened that the twitching and jerking, so common and so painful in all newly-made stumps, gave him but little pain, and the little he did suffer seemed to be, mainly, from the stump being drawn up against the bed-clothes, and was entirely prevented by a band passing over the middle of the thigh, and fastened loosely to the bed, so as to prevent the stump from rising high enough to strike the coverings above.

7.—An advantage belonging to the knee-joint section, which may be considered as directly resulting from the last-mentioned, is found in the fact, that no retraction of the cut muscles can take place after the healing of the wound; by which gradual retraction, it is well known that the muscular covering is generally withdrawn from the end of the bone, and what is called a conical stump is left, in which nothing covers the bone but integument or cicatrix tissue. My own experience would lead me to think that, in all cases where divided muscles are united over the end of a bone, as in flap amputation through the thigh, the ultimate result is a complete disappearance, by combined absorption and retraction, of the muscular tissue, which, on the first healing of the wound, gave a thick and promising covering to the end of the bone. If I be not mistaken, it will be found, if the limbs be examined a year after they are healed, that the conical stump above described is the rule and not the exception, and that, in four cases out of five, nothing but cicatrix tissue covers and protects the end of the bone. In the stump left by the exarticulation at the knee we have, it is true, nothing but integument on the face of the stump, but that integument is applied over a large, smooth, natural surface, well adapted to receive and sustain pressure, while the cicatrix, if the operation be properly performed, is thrown backwards in such a manner as to be entirely protected from pressure, in the deep fossa between the projection of the condyles.

8.—Last, and not least, of the advantages which the knee-joint section promises over the thigh amputation,

is, I think, to be found in the fact that, in one, the bone is unwounded, and that in the other it is severed with a degree of violence, the effects of which, perhaps, are not fully appreciated. The effects of this violence, both upon the bone and its envelopes, and of the exposure of the cavity of the medullary membrane, to the action of air and pus, are seen in several of the accidents which occur after amputation, some of which are merely of sufficient gravity to annoy the patient, and prolong the period of his cure; while others are of so great severity and danger, as materially to influence the safety of the operation, with regard to life. Thus, for example, among the slighter mischiefs of which the injured bone is the source, we have the exfoliation of a narrow ring of dead bone, which has been killed by the direct violence of the saw. The separation of this ring, with its attendant suppuration, keeps the wound unhealed, and the parts around, tender and painful, until the process is complete and the dead bone comes away, perhaps during twice or thrice the period which would be necessary to heal the wound without this complication. Another, and much more serious, trouble is found in the formation of those long tubular sequestra, which are sometimes found in stumps, two or three, or even four, months after amputation. The existence of these peculiar sequestra, has attracted the notice of most of the systematic writers on surgery; but I have not met with any explanation of the mode in which they are produced, except that Mr. Syme alludes to them, as produced by injury done to the medullary membrane, by which the bone, nourished by that membrane, dies and exfoliates in a tubular form. This is, unquestionably correct, as far as it goes; but it leaves unexplained, the nature of the injury to the membrane in question, which has such important consequences. This injury may be the result of suppurative action extending along the membrane, and separating it from the bone; but, if this is a possible explanation, the absence of all symptoms of undue inflammation in the cases which have occurred in our Hospital, forbids its

being received as the usual cause of the mischief. I regard it as produced by the severing of the nutritious arteries of the bone, either by the saw, while it is passing through its bony canal, or by the catlin, before it has reached the nutritious foramen.* The supply of blood thus cut off from the medullary membrane, can only be restored by the anastomosis which it has with the vessels of the spongy portion above. These vessels, however, are supplied with blood from small twigs, which enter the bone at various points around the extremity, and, of course, are contained in unyielding canals. The necessary increase in their calibre, therefore, to supply the wants of the medullary membrane, can take place but slowly, and, in the meantime, the small vessels which the medullary membrane sends into the bone are not properly filled, and the death of the bone is produced up to the point where the anastomotic supply is sufficient to save it. The medullary membrane itself, probably, never dies from this cause; but is gradually restored by the supply from above, and goes on secreting new bone on the inside of the sequestrum, while the periosteum is converting the old bone into a thick involucrum outside, so that when it is ready to come away, the sequestrum is found enclosed in a double cylinder, formed by the periosteal involucrum outside, and a smaller medullary involucrum within. These sequestra vary in size, from three to seven, or even in one instance on record, to nine inches in length. They are, most commonly, complete cylinders with here and there an opening through them. Through these openings bony granulations may sometimes shoot, if the sequestrum be left too long, by which it may be locked fast in its bed, and may require a serious and troublesome operation to extricate it. While thus remaining in the stump, these pieces

* In order to satisfy myself as to the usual point of entrance of the nutritious artery into the bone, I examined forty-five femora, contained in two of the Museums of this city, and found that in twenty-three, the nutritious foramen was about the junction of the middle and upper third, and in twenty-two, it was at, or near, the centre of the bone. In several instances it was double. The direction of the canal is always from below, upwards.

of dead bone produce all the annoyance, to which necrosis of the shaft of the long bones always give rise. The wound does not heal; the end of the stump enlarges by the new bony deposit which forms the involucrum; and extensive suppuration continues from the various sinuses which lead down to the bone, while new abscesses are constantly forming. The suffering and discharge thus continuing are sufficient to keep the patient in a constant state of constitutional irritation, which, in a feeble person, might have the most serious, or even fatal consequences; and his only relief is to be found in a removal of the cause of offence. When this is taken away, (and it can usually be done by seizing the exposed end with a strong pair of forceps, and drawing the sequestrum carefully from its bed,) the relief is immediate; the suppuration dries up, the abscesses heal, fever ceases, and the stump rapidly heals. I have dwelt more particularly on this accident, because there is but little said of it in our surgical treatises, and I think it must occur more frequently than is commonly supposed; indeed Mr. Syme makes this one of the considerations which induced him at one time to proscribe, altogether, amputation through the middle, compact portion of the shaft of the femur, he insisting that, to avoid this, as well as other accidents liable to occur in amputation through the middle of the thigh, it was better to make the section of the bone sufficiently high up to pass through the spongy tissue, which has sufficient vitality to enable it to resist the dangers liable to happen when the compact structure is sawed through.

The effects of this violence to the bone, and of its exposure in a suppurating wound, are also more seriously and more fatally exhibited in those cases where, from some previous vitiation of the system, phlebitis attacks the bone with its destructive, and often rapidly fatal consequences. Happily, in our well-ventilated and healthy hospitals, we very rarely see instances of this disease; but, if we may credit the report of some of the surgeons of Europe, suppurative phlebitis of the bones, is, with them, a common

cause of mortality after amputation of the limbs in their continuity.

I do not know that there is any analagous accident likely to happen to the bone after knee-joint amputation. In two of our reported cases, exfoliation of the cartilages took place, where, from sloughing, or retraction of the flap, the end of the bone had long been exposed, and in Dr. Catley's case, (No. 18,) from the same cause, the cicatrix never became perfect; but, besides these cases, no other inconvenience is recorded as having arisen from any affection of the bone or of its cartilage, though, in several instances, there was more or less exposure of the articular surface from retraction or deficiency of covering. In Dr. Smith's summary of European cases, nothing is said of the bone or cartilage, having, in any instance, interfered with the progress of the cure.

Having thus presented, somewhat in detail, the advantages of the amputation under consideration, as illustrated by the cases presented, I do not consider it necessary to dwell upon the objections which have been urged against it. These objections are mainly derived from the fear which has existed of opening so large a joint as the knee, in view of the terrible consequences which are so apt to follow even slight injuries of this articulation. Experience shows that these apprehensions are unfounded, and, as Dr. Stephen Smith very correctly remarks, proves, "that the dangers from exposing a joint for the purpose of disarticulating a limb, whether of shock to the system, or of severe inflammation and suppuration, are unimportant, in deciding the question of the general propriety of this operation. Fearful as are the results of the inflammatory process, instantly lighted up in ordinary wounds of the knee joint, dangerous consequences from this source are rare exceptions in the severer wound of the besection of this articulation in amputation." The reason of this appears to me evident, when we consider that the peculiar dangers of inflammation of the knee joint arise mainly from three things. 1. The extent of the synovial membrane. 2. The constant motion of the

inflamed surfaces on one another. 3. The closed character of the part inflamed, by which tension is immediately produced, as the products of inflammation begin to be retained. The section of the joint greatly diminishes the first of these sources of danger, and entirely obviates the two last. In short, after the operation it is no longer a joint, and it is, therefore, unphilosophical to expect that it should present the characteristic dangers of diseases of the joints.

It must not, in candor, be denied, that the synovial sac, remaining around and above the patella, is liable to become inflamed, and that, from this inflammation, serious consequences may arise. This accident has not presented itself to any very alarming degree, in the American cases above reported, but M. Velpeau speaks of it as having been the cause of a fatal termination in several of the cases which came to his knowledge.

The published cases of this operation are too few and too incomplete, to afford us the data for a thorough appreciation of its value, as deduced from statistical comparison. The number, however, of foreign and American cases taken together is sufficiently great to tell very authoritatively on the general question of its fatality, as compared with amputation through the thigh. Thus we have, taking Dr. Stephen Smith's resumè of the cases occurring in foreign practice, 28 cases of this amputation, out of which 12 died, and 16 recovered. To these add, of American cases, in all 18, of which 13 recovered, and 5 died. Making in all 46 cases and 17 deaths. The proportion of deaths in foreign practice is 43 per cent.; in American practice, 28 per cent.; and of all the cases 37 per cent.

Comparing this with the rate of mortality of the amputation of the thigh, we have out of 987 cases collected by Mr. Phillips, 435 deaths; and in 68 American cases which I have collected, we have 29 deaths; making an average mortality out of this large number of cases of about 43½ per cent. Thus we have, to collect these statistics in a tabular form:

Knee Joint.	Whole No.	Deaths.	Per centage.
Foreign practice,	28	12	43
American practice,	18	5	28
Both together,	46	17	37
Thigh.			
Phillips' cases,	987	435	44
American cases,	68	29	43
Both together,	1055	464	43½

making a difference of 6½ per cent. in favor of amputation at the knee joint.

It should be noticed in passing, that of the five fatal cases which occurred at the New York Hospital three died within a few days, from the direct shock of the injury, and one from the progress of the disease, which the operation had not been able to interrupt.

Of the different modes which have been proposed of performing the operation, I should give a very decided preference to that by the long anterior, and the short posterior flap. This has the advantage of throwing the wound on the most depending aspect of the stump,—thus allowing easy exit to the discharges; and it, moreover, brings the cicatrix so far back between the prominence of the condyles, that it is not exposed to pressure. By cutting short the gastrocnemius muscles, it diminishes the number, and concentrates the situation, of the ligatures, so that they can be brought through the posterior flap directly, without traversing the face of the stump. It will, however, often happen, that the mode of operation will be determined by the condition of the integuments; and it is, therefore, fortunate that the success or failure of the case does not essentially depend upon the particular method adopted. In all cases, it must be borne in mind that a great deal more flap is required, to cover the ends of the condyles, than to cover a bone sawed through its shaft; and the most common mistake, in performing this operation, has been the not making

due allowance for this circumstance, and, consequently, cutting the flaps too short.

It will be observed, that I have not, in this communication, referred particularly to the labors of Velpeau, or any of the European surgeons, though so much has been said and done by them in this matter. I have done this, because:—1. The labors of these men are fairly before the world, known and read of all men, and have particularly been laid before the American public by Dr. Stephen Smith, in the valuable paper to which I have so often referred. 2. It was our own American experience which has accumulated since Velpeau wrote, that I wished to bring to the notice of the profession, and to fortify, by it alone, the conclusions to which I have been led, as to the value of amputation through the knee joint. It is but justice, however, to my subject, that I should still further strengthen my position, by the authority of such names as Syme, Fergusson, Velpeau, and Malgaigne. I class Mr. Syme and Mr. Fergusson among the advocates of the knee-joint operation, because, although the operation which they perform—immediately above the articular surface—is not, strictly, an amputation through the knee joint, yet, as far as the soft parts go, it illustrates many of the principles of that operation, and is, therefore, most closely allied to it. The two great French surgeons above named, are unequivocal in their verdict. Velpeau, when he wrote his first essay, in 1830, on this operation, went so far as to regard it as to be preferred even before amputation of the leg. This extravagant opinion a larger experience modified; and in his work on surgery, in giving his final appreciation of the operation, after advocating it strongly in all proper cases, when it can take the place of amputation on the thigh, he says, it should never be undertaken when it is possible to amputate lower down. Malgaigne says, in a passage quoted by Dr. Smith, that this is "another of those operations too inconsiderately condemned, which, when you have a choice, should be preferred to amputation of the thigh in the continuity."

It will be observed, that throughout this discussion, the only comparison instituted has been between the operation under examination, and that through the thigh. It must be carefully borne in mind, that it is only when the alternative is between the thigh and the knee that this operation can ever be considered justifiable; and that, under no circumstances should it be performed, when amputation below the knee is in any equal degree safe or allowable.

In recapitulation of the points advanced in this paper, it would appear:—

1.—That the amputation at the knee joint has been regarded with disfavor, and rejected by the mass of the profession.

2.—The results of experience seem to warrant and demand a re-consideration of this unfavorable verdict.

3.—It is found, that the stump left after this operation, is much more useful than that left after amputation of the thigh, it being capable of bearing well, and easily, the weight of the body on an artificial limb—a consideration involving great comfort to the rich man, who wears an artificial limb; and on the poor man, who must otherwise walk with a crutch, conferring the power of walking on an ordinary peg leg, thereby enabling him to earn his livelihood.

4.—This amputation is, probably, attended with less constitutional shock, inasmuch as it is performed farther from the trunk than amputation through the thigh.

5.—The wound made in section of knee joint is really less extensive than in amputation higher up.

6.—No muscular interspaces are exposed by the knife, and, therefore, there is less danger of inflammation spreading up the thigh.

7.—Fewer ligatures, and those more favorably situated, are used in this operation.

8.—The muscles moving the stump are not severed, and the patient is able, therefore, to move the stump, with extraordinary facility, and is but little liable to painful muscular twitchings.

9.—No retraction of muscles can exist, by which the cover ings are drawn back from the end of the bone, producing conical stump.

10.—The bone is unwounded in this amputation, and thus the numerous and serious dangers, which arise from sawing the bone, and exposing its medullary cavity to air and pus, cannot exist.

11.—The dangers apprehended from opening so large an articulation, have been very greatly exaggerated, and are, in practice, found to be of rare occurrence.

12.—Statistics show that the mortality, after this operation, compares favorably with amputation of the thigh, being 37 per cent. of deaths in the former, against 43½ per cent. in the latter.

13.—The best mode of operation, when we have a choice, is by the long anterior, and short posterior, flap.

14.—The verdict of some of the first French and English surgeons, is decidedly in favor of the knee-joint operation.

NEW YORK, *December* 13, 1855.

ART. III.—*Analysis of One hundred and Thirty-one Cases of Hydrophobia.** By J. LEWIS SMITH, M.D., Physician to the North-western Dispensary.

(*Continued from* Vol. XV. *page* 245.)

BEFORE proceeding to an analysis of the symptoms, it is well to recollect that the published records of diseases are ordinarily very incomplete. Physicians do not as a general thing in their reports of cases, mention negative facts, in other words, the absence of symptoms; and those present, unless of a striking character, are often overlooked. If, then, in our investigations, we find a phenomenon or an appearance which might easily escape notice, to be recorded in several, though a minority of the cases, and its absence mentioned in few or none, we may justly consider it of frequent occurrence in the disease.

---

* Read before the Society of Statistical Medicine, New York.

PRODROMES.

It will be seen, by reference to the table, that in a large number of patients, at least one hundred, there were preliminary symptoms, of longer or shorter duration, before the commencement of hydrophobia. Eight had no premonition of the approaching evil, or, if any, so slight that it was disregarded, and they were seized unexpectedly. In the remaining number it is uncertain from the histories given whether a prodromic stage were present or absent.

In forty-three of the one hundred, the prodromes were of a character, to indicate unmistakably the approaching disease. An unnatural sensation was felt in, or adjacent to, the bitten part, accompanied often by symptoms of general indisposition, as langor, chilliness, and headache. Nine, called this sensation, an "*uneasiness*," an "*itching*," or a "numbness;" in the others it was pain, variously described as piercing, stinging, pricking, tingling, and again as dull.

These sensations, if seated in a limb as was usual, gradually extended towards the body, sometimes shooting upwards, but in other instances abandoning the first point of attack, and seizing on one more central. Hydrophobia appeared to begin when this condition of the nerves had reached the trunk. In one instance only was the direction eccentric rather than centric. This patient (No. 27) complained that the pricking sensation rushed to the tips of his fingers.

The pain I have no doubt was neuralgic; in other words, unaccompanied by inflammatory action. Its manner of extending would indicate this, and it was generally so considered by the physicians who attended and reported the cases. In many of the records it is described as following the course of the nerves.

The numbness, uneasiness, or itching, complained of by nine, was, with one exception, seated in the cicatrices, and may have been due to some molecular change, especially as the bitten part occasionally undergoes a visible alteration at the access of hydrophobia. The exceptional case occurred

in the practice of Mr. Abernethy, who noticed two red lines extending up the arm, apparently inflamed absorbents. In this instance the inflammation may have caused the sensation.

This unusual appearance occurring in the practice of the distinguished London surgeon, lent strong support to the theory, that the poison may be inert in the wound till the period of recrudescence. But as a similar phenomenon was noticed in no other instance in the collection, it is more probable that the red lines were due to the extension of ordinary inflammation from the wound, which had been made very sore by cauterization, and had not yet healed, than that it arose from progressive absorption of the poison. Although digressing, we may as well add in this connection, as bearing on the doctrine of absorption, that in two cases, (Nos. 2 and 90,) the glands above the wounded part were found in a swollen state when hydrophobia commenced, but in at least two others they were unaffected.

Pain in an upper extremity was felt by seven patients, besides those mentioned, but whether it corresponded with the side injured, is not apparent from the records.

The same symptom was also occasionally present, without sustaining any relation to the bitten part. Six felt it in the head, three in the epigastric region, one in the teeth, one in the throat, two over one side, one over the whole body, and two had shifting pains.

The following table embraces all the other prodromes published in the records:

In 13, General indisposition.
" 12, Irritability.
" 20, Restlessness.
" 9, Drowsiness.
" 14, Chilliness.
" 5, Feverishness.
" 11, Languor.
" 5, Anorexia.
" 6, Some affection of respiration, as sighing, sobbing, etc.

In 7, Difficult deglutition.
" 1, Excitation of the venereal passion.

The symptoms, then, which precede an attack of hydrophobia, are, for the most part, such as usher in an ordinary febrile disease, conjoined often with pain, or other sensation referable to the bitten part.

I have found it difficult to determine accurately, the duraton of the prodromic stage; but the following table furnishes a near approximation to the truth :*

Cases.	Durat. of Prod.
In 8,	Few hours.
" 3,	6 hours.
" 11,	12 hours.
" 24,	12 hours to 1 day, inclusive of latter.
" 22,	1 day to 2 days. " "
" 11,	2 days to 3 days. " "
" 9,	3 days to 6 days. " "
" 4,	6 days to 12 days. " "
" 1,	Few days.
" 1,	Several days.
" 1,	Several weeks.

As with most other diseases remarkable for violence and rapidity, we see that the precursors of hydrophobia are transient, and often of a character likely to excite no suspicions.

SYMPTOMS.

The striking and characteristic symptoms of hydrophobia, those which produced the chief suffering of the patients, and rendered the disease so appalling to beholders, were paroxysmal in their occurrence. In the first stages of the complaint, a sensation of choking, or oppression of the chest, was experienced, lasting for a moment, and causing a degree of restlessness. As the disease advanced, these

* The table of cases, published at the commencement of our article, contains three errors, through misprint. In No. 49, 112 days in the column of prodromes should be 1½ days; and in Nos. 123 and 127, the times given as occupied by the prodromes and disease respectively, were occupied by the two conjointly.

attacks became more severe, and the intervals shorter. In severe cases the struggles at each seizure were terrific, arising, according to the statement of the patients, themselves, from a feeling of present suffocation.

The proximate cause of the attacks, was a spasm of certain muscles; though, from the nature of the disease, it was difficult to tell exactly, which, or how many. The sufferer often referred to the throat as the seat of his distress, and the muscles in this region were, sometimes, visibly in a state of spasmodic action. Occasionally a constriction of the chest was complained of, as in Nos. 18, 42, and 44; or, across the abdomen, as in Nos. 45 and 50, leading to the belief that the thoracic and abdominal muscles were involved. The diaphragm, especially, was thought by some of the physicians, to be affected, while the fact that the patients could rush from bed and grasp objects in the midst of a paroxysm, showed that the extremities were exempt. In many instances the head was violently jerked backward in the spasm, and as this often accompanied futile attempts to drink, one was forcibly reminded of fabled Tantalus amid the refluent waves.

The commencement of the paroxysms was abrupt, and their duration generally, if not always, brief. The intervals between them varied. Sometimes there were several hours of undisturbed rest; but, in other instances, the succession of attacks was so rapid, that one had hardly ceased when another commenced. There was not, however, so great a difference in the severity of different cases, as in the various stages of the same case.

In a large number, the paroxysms after continuing for a time, subsided, or recurred less frequently. Sometimes the remission was temporary; but in other instances, permanent, especially if there were much exhaustion. This abatement should be properly appreciated, for the medical attendants frequently attributed to treatment, what was due to the nature of the disease, and the friends flattered themselves that all danger was over, when a few more hours

brought a fatal termination. There is so little suffering in hydrophobia during a remission, that one uninstructed in the nature of the malady would be very apt to form a wrong prognosis, unless he witnessed a paroxysm.

These paroxysms sometimes occurred without any obvious exciting cause, but they were usually produced by certain means or agencies. According to the records, one hundred and seven patients experienced them through the influence of liquids, and in no place is it stated that such substances could be tolerated through the whole sickness, while those records that are silent on this point are, for the most part, brief and incomplete. Contrary, then, to the assumption of some, that the dread of liquids is of occasional and not uniform occurrence in rabies, it is so uniformly present as to justify us in retaining the name which has so long designated the disease, both among professional and non-professional people.

The manner in which liquids produced this effect, varied. At least eighteen patients were thrown into a state of agitation or spasms by the mere thought, and thirty-five by the sight of them, while the same result followed with sixteen more if they were poured or splashed in the room.

This morbid sensibility, so apparent in the nerves of sight and hearing, was also present in those of touch. In one instance, a drop of oil falling on the leg caused spasms, and the same occurred in three from a drop or a few drops of water falling upon the body. Witness, too, the extreme distress when water touched the lips.

Tepid drinks could usually be taken more easily than cold, and sometimes, not always, other liquids, as tea and coffee, more easily than water.

It must not be supposed that the distress on attempting to swallow, was limited to the use of liquids. On the other hand, solid articles of diet, although it does not appear that they produced any unusual symptom by their mere presence in the room, or by being handled, could be taken as food only with the greatest difficulty, and sometimes not at all.

Agitation and spasms followed attempts to eat, as well as to drink. It appears, however, that ordinarily, solid aliment could be taken more easily than liquids, although in one case (No. 51) the reverse was true.

The records of seventy-two cases state that these remarkable attacks were likewise induced by other causes than by food or by liquids. Fifty-one experienced them from currents of air. Raising the bed-clothes, blowing, or even breathing upon the face, brushing away of flies, the movement of friends in the room; in fine, anything that produced the least agitation of the air, caused the characteristic phenomena.

The same symptom occurred, in eighteen patients, from the presence of bright objects. A light, a polished surface, a bright color, especially if suddenly introduced, were sufficient causes.

In the records of twenty-seven cases it is stated that the same effect was produced by other causes than those mentioned above, among which we may notice the entrance of strangers into the room, an unexpected noise, the sudden descent of smoke from the chimney, the vapor of ether and chloroform when these agents were used, and pungent odors, as that of musk.

We see that that remarkable condition in hydrophobia which has given the disease its name, instead of being simply a dread of liquids, as is popularly thought, is a spasmodic action of certain muscles, induced by many causes, among which liquids have a prominent place.

It has been said by some that delirium is present in hydrophobia, and by others that the intellect preserves its integrity throughout. The condition of the mind is recorded in eighty-five cases, in sixty-eight of which it was unimpaired. Of the remaining seventeen, seven were rational till a short time before death, when they became violent, or their thoughts wandering and incoherent; seven are stated to have had occasional or transient delirium, and of the remaining three whose sanity was unquestionably gone, two were in the wards of hospitals, and the other had been taking Indian hemp in large doses.

A moment's reflection, on these statistics, will convince us that the mind, in hydrophobia, is, in a remarkable degree, exempt from the destructive process to which the body so rapidly yields.

Delirium, at the close of life, is not unusual in acute diseases, especially if there be much inquietude of mind, as well as bodily suffering. Nor would it be strange if the hydrophobic spasm should cause temporary, if not continued, mental derangement. But, in truth, the patients usually had a distinct recollection of their condition in the paroxysms, so as to apologize for their behavior, showing continued sanity. It is to be recollected, too, that the extreme agitation, arising from the feeling of suffocation, might have been mistaken, and very likely was, in some instances, for maniacal excitement.

Of the three patients whose delirium was well marked and persistent, the two in public institutions were surrounded by students and the curious. Is it at all remarkable that the reason should be dethroned, under such circumstances? We should expect that the sleepless and sensitive sufferer, who is thrown into spasms by a breath of air, or an unexpected noise, would become totally crazed in such a state of annoyance and excitement. Hospital patients are treated by the great masters of our profession, who teach us the nature and phenomena of diseases; and in this instance, as in many others, we see how a limited observation of cases, or an observation under particular circumstances, may lead to the conscientious promulgation of error. The other patient had, as we have stated, been taking Indian hemp, and his delirium was such as the cannabis is known to produce. The conclusion, then, forces itself upon us, that, however much other portions of the body suffer in hydrophobia, the cerebrum is but slightly affected.

Insomnia, or a morbid wakefulness, was invariably present. There was no relief from suffering, or dark forebodings in the oblivion of sleep, unless opiates were administered in large doses; and this is the more worthy of note, because

drowsiness was not infrequent as a prodromic symptom. The lack of natural and refreshing sleep no doubt hastened the march of the disease.

The mind of the patient was usually in a state of extreme dejection, as if no ray of hope shone across his pathway. Yet, sometimes in the delusive calm which, we have said, often occurs in this disease, a degree of cheerfulness returned even when the experienced physician saw the sure prognostics of a fatal issue.

Of the other symptoms, referable to the nervous system, little need be said. Some of those mentioned as prodromic, occasionally continued for a time after the disease was developed. This was especially true of the pain.

The condition of the pulse is mentioned in 78 of the records. It ordinarily became weaker, and more and more frequent, as the disease advanced; and a remarkable feature in reference to it, recorded in twenty-three cases, was an irregularity in its rhythm. At short intervals, sometimes in consecutive minutes, sometimes in the thirds, or even quarters, of a minute, the number of pulsations underwent a marked variation. For instance, in one case, the numbers for the quarters of a minute were 32, 28, 25, and 24; and in another, for the thirds, 34, 34, and 27, and again, 40, 25, and 21. This is a fact, in reference to the pulse, likely to be overlooked, and that it was noticed in so many cases, proves it to be of frequent occurrence.

After what has been said of the paroxysms, it is unnecessary to make more than a passing allusion to the respiratory function. The breathing, except in the paroxysms, was easy and natural, and there were no symptoms of pulmonary disease. In the records of sixty-three cases, the spitting or hawking of mucus is mentioned, viscid and often expelled with difficulty. In forty-eight of the number, there is no record of this till the last day, and in none is it mentioned prior to forty-eight hours before death. The profuse flow of saliva, then, which is well-known to accompany hydrophobia, is not to be looked for till the disease is well advanced.

The condition of the digestive system was materially affected. Thirst was complained of, often extreme, and accompanied by a burning sensation in the throat. The appetite in some cases remained unimpaired, and probably it would have been more generally present, had it not been for the anxious and terror-stricken state of the patient's mind. The bowels were constipated and distended by gas, and in many there was a sensation of gas in the stomach, or of gas rising in the throat.

In at least twenty-eight cases vomiting took place; a symptom not mentioned, so far as I am aware, in the books. In all but three this occurred within a few hours of death, so as to be, an unfavorable prognostic. The substance voided was dark-colored, like coffee-grounds or chocolate, and was probably vitiated blood, which it was generally considered to be, by the physicians who expressed an opinion of its nature. This emesis resembled in many respects that occurring in yellow fever, taking place as it did during the delusive calm of debility.

So far as we can judge from the records, there was nothing unusual in the appearance of the secretions, excepting the saliva, or in the condition of the cutaneous system.

The countenance exhibited the extreme distress and anxiety felt by the patient, whilst the eye is variously described in different records as wild, staring, glassy, or sparkling, and in others as watery, suffused, or stupid. This last appearance may have been due to opiate treatment. The state of the pupil is mentioned in thirty-seven of the records; in thirty-two it was dilated, in three contracted, and in two natural. A natural condition of an organ is less likely to be recorded than one of deviation, yet the great preponderance of cases of dilation, renders it probable that this is of ordinary occurrence in hydrophobia. The enlargement if noticed in doubtful cases, may be of considerable diagnostic value. Sometimes, not always, it could be temporarily overcome by the stimulus of light, and in several recorded to

have had it, the dilation did not occur till the disease was well advanced.

The following table gives the duration of hydrophobia in 120 cases, as accurately as we could determine it from the records.

Cases.	Duration.
In 2, - - - - -	12 hours.
" 21, - - - -	12 h. to 24 hours inclusive of latter.
" 65, - - - - -	1 day to 2 days. " " "
" 20, - - - -	2 days to 3 days. " " "
" 9, - - - - -	3 days to 4 days. " " "
" 1, - - - -	4 days to 5 days. " " "
" 1, - - - - -	7 days. " " "
" 1, - - - -	9 days, " " "

The mode of death is stated in sixty-three cases. Forty-six died quietly in a state of asthenia. They grew progressively weaker, and in general the paroxysms ceased before the final event, probably from a want of vital energy. Fourteen closed life in spasms, asphyxiated, as shown in some instances by the flushed face and turgid vessels. The remaining three are stated to have died comatose or lethargic.

The following deductions will impress these facts more strongly upon the memory:

1.—Hydrophobia may occur at any period of life, but it is most common between the ages of ten and forty.

2.—More males take the disease than females.

3.—Cases occur in all seasons of the year.

4.—The period of incubation is seldom or never less than ten days, and it may reach in rare instances to five or six years. But the vast majority take the disease from the fourth to the fourteenth week after inoculation.

5.—The wound at the access of hydrophobia is, with an occasional exception, cicatrized, and when open, free suppuration is rare.

6.—The part bitten may have the usual appearance of cicatrized surfaces, or it may be of a reddish, blueish, or other color, and appear raised or swollen.

7.—The disease is ordinarily communicated by a bite, and seldom, if ever, through the sound skin.

8.—The animals inflicting the wounds, are generally rabid at the time; but, occasionally, they show no signs of rabies. When not mad, they usually become so afterwards.

9.—The attack may be hastened by excitement of the passions, and by irregularities and excesses in the manner of living.

10.—There are, generally, but not always, well-marked premonitory symptoms of hydrophobia. These are such as usher in an ordinary febrile disease, "conjoined, often, with pain, or other sensation, referable to the bitten part."

11.—The prodromic stage lasts from a few hours to three or four days, and occasionally longer.

12.—The symptoms which especially distinguish hydrophobia from other diseases, arise from paroxysmal spasms of certain muscles concerned in respiration, producing a sensation of choking.

13.—These paroxysms generally begin abruptly, and last only for a moment. They sometimes arise without obvious cause; but, they are also produced by any agency which excites the patient, or tends to accelerate or modify the respiratory act. From the highly sensitive condition present in hydrophobia, the causes are often trifling, among which we may mention the thought, sight, sound, and touch of liquids, attempts to swallow, currents of air, the sight of bright objects, the entrance of strangers, unexpected noises, and pungent odors.

14.—The mind, in general, preserves its integrity till the close of life; but lies in a state of hopeless dejection.

15.—Insomnia is commonly present, unless a narcotic is given.

16.—The pulse becomes progressively more frequent, and, in many cases, presents sudden variations in the number of beats.

17.—Hawking and spitting of saliva, are rare in the first, but of common occurrence in the last, stages of the disease.

18.—Thirst, constipation, and meteorism are present, and the appetite varies in different cases.

19.—Many patients shortly before death, are taken with emesis, and the matter vomited is dark, like coffee-grounds.

20.—On the countenance are depicted anxiety and distress, and the pupils are often in a state of dilation.

21.—The disease, with rare exceptions, terminates within four days.

22.—Death usually takes place by asthenia, sometimes by asphyxia, and, in rare instances, by coma.

POST-MORTEM APPEARANCES.

It has been truly said that post-mortem examinations have failed to throw much light on the pathology of hydrophobia. The lesions discovered after death have not only not been uniform, but they have often seemed to be accidental or the result of cadaveric changes. It is evident that the morbid process, which takes place, is mainly in the nervous or vascular system, and to the examination of these the pathologist should direct his attention.

The most frequent change, yet noticed, has been in the vascular system. The blood, according to the testimony of most observers who have recorded the appearance of this fluid, is darker and less coagulable than in health. It is apt to escape from the vessels forming ecchymotic patches, and, after death, to settle in the depending parts of the body, causing lividity of the surface. So far as the records in our collection mention, expressly or by implication, the condition of this fluid, it was in like manner changed, having a darker color, and less coagulation than usual.

The most minute account of the condition of the blood in hydrophobia, which I have met, is in *Schmidt's Jahrbücher*, for 1843, from a German observer, who subjected a specimen to a careful examination. He says, "The blood was found to be of a dark red color, and except that remaining in the heart, it contained little coagulated fibrin; the veins were filled with non-coagulable blood. The corpuscles appeared as rounded vesicles, of a dull white hue, and destitute of

nuclei. Some globules, with indented edges, were mixed with the others, and there was no cylindrical agglomeration, as has sometimes been remarked. A solution of chlorine or muriatic acid rapidly disorganized the corpuscles, and this circumstance afforded, in fact, the chief distinctive character of the blood in this case. The application of muriatic acid caused the disengagement of numerous bubbles." From these facts, there is reason to believe that a microscopic and chemical examination of the circulating fluid in hydrophobia, may yet lead to interesting and valuable discoveries.

The records of the condition of the cerebro-spinal system, as revealed by the autopsies, we have arranged in the following tables for the sake of brevity :—

CRANIUM.

Dura Mater.	Arachnoid.	Pia Mater.
In 10 cases, congested.	In 7 cases, vascular.	In 23 cases, vascular.
" 2 " natural.	" 11 " opake.	" 1 " infiltrated.
	" 2 " adherent.	" 1 " opake.
	" 3 " thickened.	
	" 3 " natural.	
	" 1 " dry.	

In nine other records it is stated, that the membranes of the brain were congested; and, in five more, that they were natural.

Cerebrum.	Cerebellum.
In 20 cases, vascular, generally.	In 4 cases, vascular.
" 6 " " partially.	" 4 " softened.
" 12 " natural.	" 2 " natural.
" 7 " softened in places.	" 1 " inflamed.

The lateral ventricles contained :—

In 9 cases, no more than the usual amount of serum.
" 5 " from ℥ss. to ℥ii.
" 3 " " ℥ss. to ℥i.
" 1 " " ℥iss.
" 3 " a larger amount than usual.

The effused fluid was sometimes clear, sometimes straw-colored, and sometimes reddish.

Choroid plexus.	Medulla oblong.
In 5 cases, congested.	In 4 cases, vascular, in part.
" 2 " natural.	" 2 " softer than natural
" 2 " pale.	" 2 " natural.
" 1 " of a watery appearance.	

We see that the encephalon, in hydrophobia, is generally in a state of vascularity, but that there is no lesion or alteration uniformly present, so as to be looked upon as essential. In four of the records it is stated that air was found in the vessels of the brain, or meninges, arising probably from decomposition of the blood.

SPINAL MEMBRANES.

In 13 cases, congested, over greater or less extent.
" 3 " containing ecchymotic patches.
" 1 " " gelatinous deposits.
" 2 " natural.
" 2 " opake.

MEDULLA SPINALIS.

In 10 cases, no unusual appearance.
" 6 " vascular (the degree and extent varying).
" 4 " softening.
" 1 " inflammation.

It is possible that, in this last case, (No. 12 of our collection,) congestion was mistaken for inflammation, and it is in the same record that the cerebellum is stated to have been inflamed.

In nine of the cases it is stated, that there was more or less effusion at the base of the brain, and in one that none was found.

The condition of the cranial nerves is given in seven of the cases, in six of which they seemed natural; but in the other, the filaments of the par vagum were injected.

Some of these autopsies were conducted by anatomists, and some by pathologists, of world-wide renown, among whom we may mention Rokitansky and Bright; but we see how unsatisfactory is the result—how little light they throw on the nature of this appalling and mysterious disease. Nor were these examinations all made by the unassisted eye. Prof. Bennett, of Edinburgh, who was present at the autopsy of Mr. Sidey's patient, examined, microscopically, the three branches of the 8th pair, and the gray and white substance of the pons, but detected nothing unusual.

(*To be continued.*)

ART. IV.—*Additional Observations on the Invariable Existence of a Premonitory Diarrhœa in Cholera; being a reply to Dr. Hutchison's Article of September*, 1855. BY DAVID MACLOUGHLIN, M.D., of London, Eng.

IN the *New York Journal of Medicine* for September last, there is an article by Dr. Hutchison, of Brooklyn, to which, in the interest of Medical science, I wish to reply, and I trust that my reply will find a place in that valuable periodical.

Before going further, permit me to assure Dr. Hutchison that I have had, and that I can have, no intention "of omitting" anything he has said on the question before us. My object is the advancement of medical science, and not "to gratify" myself, as well as others who rely on my statements more than on their own experience, by laying down rules which are not based on accurate observations and on accurate researches, at the bedside.

What are the points at issue between Dr. Hutchison and myself?—

I have laid it down as an invariable rule, that cholera, that is, vomiting, spasms, etc.,—is always preceded by a diarrhœa—for a few hours, or for a few days, or for a few weeks.

In opposition to this, Dr. Hutchison says:—

1.—That a person in good health, and consequently free from diarrhœa, may be seized simultaneously with vomiting, spasms, purging, etc.

2.—That a person in good health, and consequently free from diarrhœa, may be seized simultaneously with vomiting, purging, collapse, etc., without having had any spasms.

I will not appeal, for reasons which will be at once understood, to my own private and individual observations and researches at the bed-side, to prove that every case of cholera is preceded by a diarrhœa, and that the rule I have laid down is correct; but I will appeal to the observations, and to the researches at the bed-side, of gentlemen holding public

appointments, and who consequently have carried on their observations and their researches publicly, and who have taken the trouble to certify to the General Board of Health here that every case of cholera admitted into their establishments had had a premonitory diarrhœa, for a longer or shorter period, previous to the attack of vomiting, spasms, etc., and I beg to name the Medical Staff of the Middlesex, the St. Thomas, the Westminster, the Homœopathic, the St. Mary's, the University College Hospital, and the St. Bartholomew Hospital, as the gentlemen who have given the above certificates to the General Board of Health.

I must add, also, that six and thirty medical gentlemen employed at the Poplar Union, and who have kept a valuable record of all the cholera cases which have occurred for the last five years, in that Union, have certified that every case had had a diarrhœa, for a shorter or longer period, previous to the attack of vomiting, spasms, etc. And further, by referring to the Registrar General's Return of Births and Deaths, for 1853, and by referring to the *Medical Times* for the year 1853, it will be found that every case of death from cholera in London, during 1853, had had a diarrhœa before being attacked with vomiting, spasms, etc. Consequently, with this mass of evidence before me, I must conclude that I am right in having laid it down as a rule, that every case of cholera is preceded by a diarrhœa for a few hours, or for a few days, or for a few weeks, and, consequently, I submit this is an answer to Dr. Hutchison's first objection, viz.: that a person in perfect health, and consequently free from diarrhœa, may be seized simultaneously with vomiting, spasms, purging, etc.

It seems that Dr. Hutchison places implicit confidence in the statement of his patients, that they were seized simultaneously with vomiting, spasms, purging, etc.

If the Doctor will take the trouble to refer to page 207 of this Journal for September, he will find it reported by Dr. Vanderveer, in his excellent article on cholera, that cases were admitted into his wards in a dying condition, who

neither vomited nor purged after admission, and their relations, who accompanied them, stated positively, that they had not previously—but what did the autopsy reveal?—that not a particle of food could be discovered in the stomach, or a particle of fæcal matter could be discovered in the intestines, showing that these patients had both vomited and purged severely before being admitted into the Hospital.

Therefore, the statements of patients, and the statements of their friends, are not to be implicitly depended on—and we must remember that, at the bed-side, we must be guided in forming our opinion on the case by our knowledge of anatomy, physiology, and pathology, and that we must not blindly trust to the word of the inhabitant of a palace or to the word of the occupier of a hovel.

As to Dr. Hutchison's second objection:—that a person in perfect health, consequently free from diarrhœa, may be seized simultaneously with vomiting, purging, collapse, etc., without having had any spasms. Again, I will not appeal to my private and individual observations and researches, in opposition to Dr. Hutchison's statement on this point, but I will refer to the observations and to the researches of the medical staff of the above seven Hospitals, and also to the observations and researches of the six and thirty medical gentlemen employed at the Poplar Union, and further, to the Registrar General's weekly Return of Births and Deaths for 1853, and to the *Medical Times* for 1853, who all admit that spasms are one of the invariable symptoms of cholera, and mark the ending of the premonitory stage and the beginning of the second stage of cholera.

But is it not well known to the profession that spasms are so invariable a symptom of cholera—that, even for hours after death, we often see the extremities suddenly jerked up by spasms, to the great alarm of all who are not aware of this pathological fact? Consequently, we have, as yet, no authenticated case of cholera without spasms, and it must remain as an admitted fact, that spasm is an invariable symptom of cholera.

At page 225 of this Journal for September, Dr. Hutchison says: "That, according to Dr. Macloughlin, diarrhœa becomes cholera as soon as cramps are developed, and not till then."

If Dr. Hutchison will take the trouble to refer to the preface of the "*Result of an Inquiry into the Invariable Existence of a Premonitory Diarrhœa in Cholera,*" which is in his hands, he will there see that it is said, that cholera has four stages, —that of diarrhœa—that of vomiting, spasms, etc.—that of collapse—and that of reaction; and, therefore, Dr. Hutchison is in error when he says, "That, according to Dr. Macloughlin's own showing, diarrhœa becomes cholera only as soon as cramps are developed, and not till then."

As to the fact that a person, laboring under painless diarrhœa, may be walking about for amusement, or for business, or engaged at his usual occupations at home,—with the cold cyanic state of the skin, and with the cold clammy dew of death all over his body,—the heart having ceased to beat, and the blood having ceased to circulate,—unconscious that he has anything serious the matter with him, which is doubted by Dr. Hutchison, I must again refer to the observations of all those gentlemen who have seen, and who have minutely studied, the rise and progress of cholera, at the bedside, in all parts of the world; and it will be found that they have met with cases where the patient was laboring under painless diarrhœa, who was pulseless, and where the beating of the heart could not be heard, and who had the cold cyanic state of the skin, with the cold clammy dew of death all over their body, and who were still walking about, and complaining of no pain or uneasiness, and the next moment, possibly, were prostrated by vomiting, spasms, etc.

In two such cases, in 1832, when bleeding was supposed to be a cure for cholera, according to Broussais' views, I opened the temporal and the brachial artery, in the same individual; and, although both patients lived for several hours after, without having the vessels secured, no blood

flowed.—(See my letter to Dr. Cormack, Editor of the *Association Medical Journal.*)

Consequently, I submit that I am justified in stating, that a person having a painless diarrhœa, may have almost the whole serum of his blood drained away, his blood may have ceased to circulate, and his heart may have ceased to beat, although he may be walking about, unconscious that he has anything serious the matter with him, with his skin cyanic, and the cold dew of death upon him.*

In conclusion, I beg leave to say:

1.—That cholera—that is, vomiting, spasms, etc.,—is always preceded by a diarrhœa, for a few hours, or for a few days, or for a few weeks.

2.—That there is, as yet, no well-authenticated case of cholera without an attack of spasms.

3.—That a painless diarrhœa may drain away almost the whole serum from the blood, until the blood has ceased to circulate, and until the heart has ceased to beat, before the patient is attacked with vomiting, spasms, etc., that is with the second stage of cholera.

4.—That if the disease is scientifically attended to in its diarrhœal stage, it can be cured, and, consequently, the developed stage prevented, and life saved.

5.—That these two pathological facts are now acquired to medical science, viz.: 1.—That every case of cholera is preceded by a diarrhœa, for a few hours, a few days, or a few

* In a pamphlet on the *Premonitory Symptoms of Cholera*, by Dr. MACLOUGHLIN we find a similar statement:—"We must not lose sight of this most important pathological fact, that it has been reserved to Cholera to show us that we can walk about for pleasure, or business, or attend to any laborious occupation we may have at home, after our blood has been drained by a painless diarrhœa of almost the whole of its serum, and after our blood has ceased to circulate, and after our heart has ceased to beat." No fact, case, or proof whatever, is given to substantiate this extraordinary assertion, which we need not say, is in violation of reason not less than every known physiological law. Whatever Cholera may have shown to London practitioners, it certainly has never exhibited on this side of the Atlantic such an anomaly as a person "walking about for pleasure, or business" with a lifeless, pulseless heart in his breast. We trust the author does not think us so credulous as to sanction such fabulous statements.—(*Eds. N. Y. Jour. of Med.*)

weeks. 2.—That the disease, scientifically treated in the diarrhœal stage, is easily cured.

6.—That it is in the power of human foresight to prevent an attack of developed cholera.

In a letter dated 2nd July, 1855, inserted in the *Association Medical Journal*, it was attempted to point out what diarrhœa, if left to itself, will run into cholera in a few hours; and what diarrhœa, if left to itself, will not run into cholera for a few days, or for a few weeks.

I am fully aware that this pathological point requires to be further studied. I, therefore, submit it to the profession, in the hope that more careful and more attentive observers will be enabled to give us valuable information on this important subject, so that the medical attendant, on arriving at the bed-side, may be enabled to pronounce whether his patient will be attacked in a few hours, or in a few days, or in a few weeks, with cholera, if the diarrhœa is not scientifically attended to, or whether the diarrhœa will be cured by the efforts of nature; and so that the medical attendant may not be left, as he now is left, to establish his prognosis on conjectures.

There is, also, another point to which I beg leave to call the attention of the profession.

I have now seen five severe outbreaks of epidemic cholera, and I have reason to believe that a great and an important change takes place in the constitution of every individual, where epidemic cholera is about to break out, which change in the constitution of every individual, persists while the disease rages, and after the disease has passed away for some time.

That this change in the constitution of individuals is manifest by the facts, that those of a costive habit, who have a passage from their bowels only every two, three, four, or five days, of hard fæcal matter, have now a passage from their bowels daily, of soft fæcal matter.

That those who are in the habit of having a passage daily, of solid fæcal matter, have now two or three passages daily, from their bowels, of soft fæcal matter.

That those who usually require laxatives to keep their bowels free, now do not require laxatives; or, if they take any, they find that one-half, one-third, or one-quarter, the usual dose has the same effect as a full dose had formerly.

And further, that it is now dangerous to give a full dose of purgative medicine, lest this dose should induce diarrhœa, followed, too often, by fatal cholera. The *Medical Times*, of September, 1854, page 272, contains the report of four cases of cholera, which were induced in St. George's Hospital here, by the administration of the full dose of purgative medicine, and of which, one died.

That, further, every individual in the locality is troubled with more flatus than usual, especially between one and five in the morning, and that every one about to be attacked with diarrhœa has a pressure, and a weight on the sphincter of the anus, and a feeling of insecurity, as if, at any moment, he would lose command over it.

If, in consequence of the observations and of the researches of the profession in every country, it is ascertained that this change in the constitution of all the individuals in a locality where cholera is about to break out, does take place, and that this change persists while cholera rages, and after it has passed away some time, it may throw some light on the etiology of the disease, and prove that cholera is not a contagious disease.

34 BRUTON-STREET, BERKELEY SQUARE, Oct. 28th, 1855.

ART. V.—*Report of Three Cases of Dislocation of the Femur Reduced by Manipulation.—New Method of Reducing Dislocations of the Femur on the Pubes.* By E. J. FOUNTAIN, M.D., of Davenport, Iowa.

RECENTLY I sent to Dr. Reid, of Rochester, New York, a brief report of three cases of dislocation of the thigh,—one of dislocation upon the dorsum ilii, and two upon the pubis —all reduced by manipulation. At his suggestion, I send a full report of these cases for publication. The case of dis-

location upon the dorsum was reduced very quickly and easily by following exactly the directions given by Dr. Reid, with whom this vastly improved method originated. The two dislocations upon the pubis, I reduced by manipulations based upon the same principles; but by a mode of manipulating quite different from that required for the reduction of a dislocation upon the dorsum ilii. The report of these two cases will be the first of the kind upon record. A concise summary of the rules for the operation will be appended to the report.

Dislocation upon the dorsum ilii.—Oct. 7th. I was called in the night to go in haste to the relief of a lady, Mrs. S—, who had received, as stated, some serious injury of the hip, or thigh, by being thrown from a wagon. I was accompanied by my partner, Dr. Adler. We found the patient in bed, complaining of pain in the left hip. The examination revealed at once the nature of the injury, which was a dislocation of the left femur upon the dorsum ilii. On placing the patient erect, the characteristic appearance was presented. The knee resting upon the lower third of the thigh, the great toe of the foot upon the instep of the opposite limb, and the trochanter major approximated to the crest of the ilium. The diagnosis was confirmed by an attempt to rotate and abduct the limb. A mattress was thrown upon the floor, and upon this the patient was placed upon her back. A towel was carried around the sound thigh and hip, and held down by Dr. Adler; but this assistance I found to be quite unnecessary. I then grasped the knee with my right hand, and the foot with my left; flexed the leg on the thigh, and carried the knee and thigh over and upon the sound one, and then upwards as high as the umbilicus, keeping it constantly pressed down upon the body. I then carried the knee outward, bringing the heel inward and the foot over the opposite limb, at the same time making gentle oscillations of the thigh, when the head of the bone slipped suddenly into its socket. The force required was quite moderate, and the pain almost nothing. The *time* occupied by the manipula-

tion, from the instant I took hold of the knee and foot, until the operation was completed, did not exceed *ten seconds.* The manipulations were made by one continuous uninterrupted motion. The knee was caused to make a "semi-circular sweep" over the sound limb and across the body, then a few quick oscillations, and it dropped down into its natural position. I held the thigh up firmly and steadily, while making the oscillations; and in this position, at right angles with the axis of the body, and abducted, and the foot over the opposite thigh, the head of the bone entered its socket.

Dislocations on the Pubes.—Case 1.—In June, 1854, I was called to see a man who had fallen from the second story of a house to the ground, upon some pieces of timber. His lower jaw was fractured, and his left hip dislocated. The limb was a trifle shortened, and the foot strongly everted. The prominence of the trochanter major was lessened, and the head of the bone could be felt upon the pubes. While waiting for the appearance of Dr. Arnold, who had also been sent for, I was reflecting upon the necessary arrangements to be made for the application of the *pullies.* While thus meditating upon the subject, I began to think of the possibility of reducing the dislocation by manipulation. Considering the position of the head of the bone and its relation to adjacent parts, it occurred to me that by rotating the limb still more strongly outward, I might elevate the head of the bone from its resting-place—the trochanter major acting as a fulcrum. Then, by carrying the leg and foot, and after it the knee and thigh, over the opposite thigh, while the limb was still strongly rotated outwards, the head of bone would be made to move upwards and outwards in the arc of a circle of which the trochanter major would be the centre, and the neck the radius. After being thus brought over and upon the edge of the acetabulum, a motion of the limb directly upwards, would, in the same way, throw the head of the bone into its socket,—the muscles attached to the trochanter major holding that point comparatively fixed.

Before the arrival of Dr Arnold, I had determined to test the theory; and on explaining my views to him, he at once expressed his willingness to have the attempt made as I suggested. At worst, it could only fail without much, if any, harm, and then we had the pullies ready for application after the "classical method."

The patient was placed upon the floor on a quilt. Being a man of strong muscular development, I thought there would be more certainty of success if relaxation was first produced by the inhalation of chloroform. He readily came under its influence. When quite unconscious, the limb was taken by the foot and knee and rotated outwards, the leg flexed and carried over the opposite knee and thigh, the heel kept well up, and the knee pressed down. This motion was continued by carrying the thigh over the sound one as high as the upper part of the middle third, the foot kept firmly elevated. Then the limb was carried directly upwards by elevating the knee, while the foot was held firm and steady, at the same time making gentle oscillations by the knee, when the head of the bone suddenly dropped into its socket. Time required in the operation, from twenty to thirty seconds. The force used was slight; I believe it could have been reduced about as well without the chloroform.

Case 2.—Oct. 31st, 1855.—John McCarthy, an Irishman, had his hip dislocated by falling with a horse he was riding. The horse slipped and fell, rolling over upon him. I found the limb about the same in length, as the sound one; but greatly everted, the toes pointing directly outward. On attempting to rotate and flex the limb, pain was produced, and a comparative immobility manifested by resistance. The head of the bone was felt forward upon the pubes. As soon as I discovered it was a dislocation, my first thought was to send for Dr. Adler to witness the operation. But the temptation to take hold and reduce it immediately, was too strong. The patient was resting upon a low couch. I immediately took hold of his knee and foot, rotated outwards and flexed the

leg by carrying the foot over the sound thigh, keeping the heel well up, and pressing the knee down. After I had brought the thigh in this way over the upper part of the sound one, I carried it directly upwards, holding the foot firmly up and making oscillations by the knee, when the head of the bone slipped into its socket, and the limb at once assumed its natural appearance and mobility. A little more force was required in this, than in the other case; but it was still quite moderate, and the pain very slight. In this case I had no assistance whatever. Time occupied in operating, about twenty seconds.

The history of these cases fully demonstrates, to my mind, the immense value of this new method of reducing dislocations of the hip. Notwithstanding the unsatisfactory results of the trials at the New York Hospital, I have perfect confidence in the correctness of Dr. Reid's method of manipulation. It is certainly one of the greatest improvements of modern surgery, the value of which may be understood when contrasting an operation requiring but ten or twenty seconds and without pain, with the instructions of Sir Astley Cooper, viz.: Venesection to syncope, hot bath, tart. antimony to nausea, and then the application of the pullies from four to six hours, if necessary! To Dr. Reid is due the credit of this splendid improvement, in which the whole profession must participate, as a most valuable contribution of scientific surgery to the relief of suffering humanity. It remains to be seen how far the test of future operations will confirm the value and correctness of the method of reducing dislocations on the *pubes*, as illustrated by the two preceding cases.

It is my opinion that dislocations into the thyroid foramen may be reduced by the same method as the last.

In conclusion, I will recapitulate the method of operating for dislocations on the *pubes*.

Taking the knee in one hand, and the foot in the other, rotate the whole limb outwards, and flex the leg on the

thigh by carrying the foot over the opposite knee. Then carry the limb, foot forwards, over the opposite thigh, at the same time twisting the heel upwards, and pressing the knee down. Carry the thigh in this way over the sound one as high as the upper part of its middle third, then elevate the limb by raising the knee while the foot is held firm, at the same time making gentle oscillations when the head of, the bone will slip suddenly into its socket.

ART. VI.—*Case of Large Hæmatocele.* By F. D. LENTE, M.D., Surgeon to the West Point Foundry, N.Y.

WAS called on the night of the 5th of January, 1854, to Mr. B— M—, aged 59 years, robust, and in good general health. Found him suffering great pain, and tossing about in bed, countenance anxious, pulse rapid, and rather feeble. My attention was immediately called to the condition of the scrotum, which was found to be immensely swollen on the right side, at least as large as a man's head, tense, dark-colored; in some parts purple,—in others, nearly black. The tumefaction also extended along the right inguinal canal, and, in this situation, as well as towards the right ilium, the integuments were much ecchymosed. The penis was completely concealed by the swelling. It was nine o'clock when the patient was first seen by me, and, upon inquiry, found he had been up the "Breakneck" mountain with a horse and sled; that, by some accident, he fell, and struck with his right groin upon the sled. He says the swelling almost immediately appeared, and attained its present dimensions before he reached home, which was within a short time. He informs me, however, that he was, several years ago, when living in Orange County, troubled with a similar difficulty, —the swelling, however, not being half its present size, and was "operated upon" by Dr. Geo. C. Blackman, now Professor of Surgery in the Ohio Medical College; and there is a very evident cicatrix, about two inches and a half long, on the anterior part of the tumor; but of the precise nature

of the operation, patient can give no idea.* Since that time, he says there has always been considerable enlargement of the part, requiring a suspensory bandage, but not giving him any great inconvenience. Pressure on the tumor gave considerable pain, as it did also along the right inguinal canal; it was dull on percussion, hard and solid to the touch, and cold; abdomen soft, and not painful on pressure; the bladder has been evacuated, since the accident, without difficulty.

From the general aspect of the case, and the symptoms above enumerated, it was presumed to be hæmatocele, but it was not certain that there might not be a hernia combined with it. That there had been some other abnormal condition of the parts, previous to the accident, was evident, but the true nature of this could not be known. At all events, the sufferings of the patient, and the fear of impending sloughing, rendered some immediate steps for the patient's relief necessary. Having previously administered an enema, which acted tolerably well, I resolved to make an explorative incision, as for hernia. Therefore, by the light of a "dip candle," and the aid of such of the friends of the patient as could be induced to lend their assistance, I proceeded to make an incision over the anterior part of the tumor, commencing over the right inguinal ring. This extended about three inches in length and in depth, through the skin, adipose tissue, and superficial fascia; the edges immediately separated widely, and the adjacent layers seemed to bulge a little between them. Fluctuation could now be distinctly felt; but, just at this moment, my candle-holder fainted, and the delay, occasioned by this, seemed to worry the patient, who had borne the pain remarkably well (no anæsthetic being at hand). Upon arriving at what appeared to be the last layer, a nick was made into it, and immediately, a large stream of sero-sanguinolent fluid gushed out with considerable force.

* Subsequently, I was informed by Dr. Blackman, that the case gave rise to considerable difference of opinion between himself and some other physicians, who were all of opinion that it was hernia, while he regarded it as hæmatocele.

This continued to flow until it filled a quart bowl; the incision was then enlarged, and a quart more of large clots and fluid blood was pressed and scooped out with the fingers. Immediate relief to the severe pain followed the evacuation of the contents of the sack. By this, the swelling was reduced to about one-half its original size. It was then found necessary to make deep incisions in the hypertrophied and almost sloughy cellular tissue of the scrotum, three in number,—one near the perineum, which the swelling also involved, and one on either side of the raphé. This gave exit to still more extravasated blood. Ordered stimulants, *pro re nata*, stimulating and antiseptic poultices, and an anodyne.

January 8th.—Up to this time the swelling has continued pretty much the same. Large clots and fluid blood, and serum have been discharged from the wound. The discoloration has begun to disappear, and the scrotum looks better, but the ecchymosis has deepened in color towards the groin and ilium, and has extended round the hip and right buttock. Some delirium at times; pulse remarkable, considering the general condition of patient, which, though very feeble, is not threatening—scarcely any two pulsations in a minute appearing to be alike, and being extremely feeble and irregular in rhythm, indicating, *per se*, impending dissolution. Stimulants are required pretty freely, anodynes, and enemata.

January 11th.—Doing well. To-day, for the first time, the pulse can be numbered. Swelling has materially subsided, and discharge is assuming a purulent character. Ord. stimulating ointment and bandage.

January 14th.—The whole swelling is now about the size of a large fist, and the right testicle can now be felt to be the size of a turkey's egg, firm and solid.

February 1st.—The tumor is now not half the size it was previous to the occurrence of the accident, and does not require any artificial support.

ART. VII.—*Abstracts of the Proceedings, Papers, etc., of Medical Societies of New York.*

PATHOLOGICAL SOCIETY.

REGULAR MEETING, NOV. 14TH, 1855.—DR. BOLTON, PRESIDENT.

Deficiency of Occipital Bone.—DR. DETMOLD exhibited to the Society a child which presented a deficiency on the median line in the occipital bone, near its junction with the two parietals. The opening was rounder than the Fontanelle, and its borders more distinct and abrupt; its covering was thin; and, by placing the hand upon it, the pulsations of the brain could be distinctly felt. Through this spot, the act of crying or coughing protruded a tumor, which was augmented in size by the increased muscular efforts of the child. It was divided into two by the falx cerebri, which, passing across its center, acted as a constricting band. The child was 14 months old and in good health; the tumor had been first observed by the mother when it was 3 months of age; she asserted that, during sleep, the child showed convulsive symptoms. Dr. Detmold regarded the tumor as a hernia cerebri, divided into two by the falx: he was uncertain whether the deficiency was one of the congenital kind observed so frequently on the median line, or whether it was the disease recently described by continental writers under the name of "Craniotalis," or softening of the cranial bones; he inclined to the belief that it was the latter disease.

Ununited Fracture.—DR. POST presented portions of bone removed from an ununited fracture, of which the following account was given: the patient a man of 40 years of age, in good health, and of rather intemperate habits, was thrown from a cart about ten months ago, and sustained a fracture of the humerus, for which he entered the New York Hospital. There he was treated for two months, but no union could be obtained, and he left the hospital with an ununited fracture. He then came under the treatment of several physicians of the city, but experiencing no benefit, he applied to Dr. Post about six weeks ago.

A fortnight ago, an operation having been determined upon, it was thus performed: an incision was made along the outer face of the arm, the heads of the bones exposed, and a chain saw being passed around them, they were removed, and the bones brought into apposition, and wired. The wound has since done well.

Dr. Detmold enquired what in this case had been the cause of non-union? Dr. Post replied that it was probably due to the abstraction from the patient of his accustomed stimuli. Dr. Detmold expressed

the opinion that next to the occurrence of fracture on ship-board, abstraction of stimulus is the most fruitful cause of non-union.

Diseased Kidneys.—Dr. McCready presented two enlarged and congested kidneys, in which there was a considerable purulent deposit, which could be traced along the tubes, and poured freely from them upon pressure. No history of the previous symptoms could be obtained, except that the man had been attacked with sudden and violent pain in the abdomen, after working in a damp cellar, and that he had since had fever. For this he entered Bellevue Hospital, where, in a few days, he sank into a state of coma, and died. His urine (which was freely passed) was tested previous to death, and found albuminous, and the post mortem examination revealed the renal disorder above mentioned.

Lobular Pneumonia in the Adult.—Dr. McCready exhibited the lungs of a patient who entered Bellevue Hospital, with double pneumonia, which he had contracted after drinking very freely and exposing himself. In a few days after admission he died, and in the lungs were found a number of small abscesses filled with well-elaborated pus. The case was one of lobular pneumonia, which, although common in children, is rare in adults; at least he had met with no other cases of it. In the physical sounds he had been struck by the peculiarly coarse and almost mucous character of the crepitus.

Concretions from the Pancreas.—Dr. McCready presented a concretion of mixed phosphate and carbonate of lime, over one third of an inch in diameter, and above an inch long, which was found in the pancreatic gland and duct of a patient who had died, in Bellevue Hospital, of albuminuria and phlebitis, on the 23rd of October last. The patient, who was an emaciated and feeble looking person of 30 years of age, entered the hospital on the 17th of October, laboring under violent dyspnœa. His previous history was to the effect that he had been in good health up to two years ago, when he had contracted a cough which had since been accompanied by loss of flesh and hemoptysis. On entrance, his pulse was feeble and frequent; the body bathed in a profuse sweat, exhaled a disagreeable odor; the breath was extremely fetid, and the urine was albuminous. Physical examination showed the existence of phthisis. Soon after entering the ward, he had a convulsion, which was repeated in 36 hours—before this he had never been similarly affected. On the 20th, diarrhœa set in, and examination of the abdomen showed a marked tenderness over the liver, which appeared enlarged. Over the anterior aspect of the chest, a mucous râle was audible. During the night of the 20th, patient was suddenly seized

with great dyspnœa, which continued until 8 o'clock the following day, when he had another convulsion which lasted 5 minutes, and, ceasing, left him without the dyspnœa. On the evening of the 21st, however, it returned with increased violence, and he died, after a protracted struggle at one o'clock on the morning of the 23rd. At the post mortem examination, there were found eight abscesses in the cerebrum, each containing about half an ounce of pus; the cerebellum had none. The lungs contained a small amount of tubercular matter, and their surfaces were covered with small multiple abscesses. The liver contained numerous small collections of pus, which were scattered throughout its substance. The spleen was enlarged and softened, and contained a number of discrete abscesses. The right kidney contained an abscess in its secreting, portion which held about one ounce of pus. It was lined by pyogenic membrane, and did not connect with the tubular portion of the kidney.

In the pancreas was found the concretion already described. The urine taken from the bladder after death was examined by Dr. Draper, House Physician, and found to contain albumen, epithelial cells, and casts of the tubes and blood globules, with exudation corpuscles. Its specific gravity was 1012.

Fœtus Destroyed by the Funis.—Dr. Krakowitzer exhibited a fœtus of 4 months, the abortion of which had been caused by interruption of the circulation through the funis, which had been compressed by the following arrangement of its course:—Passing from the umbilicus of the child, the cord had wound around over the shoulders around the neck, under the arm to the placenta, causing sufficient pressure to stop the circulation and produce death. The act was preceded by a rigor three days previous, and pain in the abdomen on the day of its occurrence.

Necrosis of Femur after Amputation.—Dr. Markoe presented a necrosed femur which had been removed some weeks ago by Dr. Buck, who gave the following details of the case:—The patient, a boy about 15 or 16 years old, received, about three or four years ago, an injury to the thigh, which was followed by inflammation of its tissues and bone, and finally resulted in necrosis. Contrary to custom, the exfoliation took place on the inner aspect of the thigh, and four fistulous orifices existed there, from which there was a profuse purulent discharge. The boy's health was, at that time, so much impaired, that Dr. Rodgers, who saw him, advised amputation, but the family objected to it. About a year ago his condition improved most surprisingly; the suppuration diminished, and so much was his health reëstablished that Dr. Buck enter-

tained hopes of saving the limb by removing the sequestrum, but advised delay until the fall. All progressed well until August, when, after a fatiguing walk, profuse hæmorrhage occurred from the fistulous orifices which was uncontrollable by compression of the artery as it passed over the pubis, and was checked only by firm pressure over each of the fistulous orifices. At each renewal of the dressing this recurred with so much violence that the attending physician called in Dr. Buck. The question now was not one of saving the limb, but the life of the patient; and to do so, Dr. B. regarded amputation, either through the coxo-femoral articulation or through the femur, leaving the head of the bone in situ, as the only alternative. The operation was performed, the head of the bone being left, and the hæmorrhage so well controlled that not more than three or four ounces of blood were lost. The patient did very well, and in three weeks was sitting up in his chamber. Dr. Markoe then continued the account. The amputated part being examined, the femoral artery was found perforated by a needle-like spiculum from the end of the sequestrum, and thus arose the violent hæmorrhages afore-mentioned. The opening in the artery was found filled by coagula, which probably saved the patient from death by hæmorrhage. One point in the case which was unique to him was this: the sequestrum was found lying free within its cavity; no involucrum investing on its inner face.

Sequestrum after Amputation.—Dr. Markoe also presented a nearly cylindrical sequestrum, about six and a half inches in length, removed from the stump of a thigh, amputated in June last. After the operation the patient did well, until the external wound had diminished to the size of a shilling, when its lips pouted, and a dead bone was discovered at its bottom by the probe. This was one month after amputation, and Dr. M. waited four months, hoping that nature would cast off the dead matter without aid; this, however, did not occur, and six weeks ago he seized the dead bone with a pair of forceps and made traction, but was unable to move it. Convinced that, as four months had now elapsed since the operation, the sequestrum must be detached, he took a stronger instrument, and making firm traction, moved the necrosed part about three-quarters of an inch, when it stopped, and would come no further. He then made occasional traction, hoping gradually to overcome the resistance, but failing to do so, he determined to resort to operation, and thus proceeded:—Laying bare the end of the bone, he chiseled away about one-quarter of an inch of the involucrum; then making traction, and examining with his finger, he discovered a spiculum of bone resembling a nail, running from a bony wall

within through a hole in the sequestrum to the involucrum without, which being broken by a blow of the chisel, the sequestrum at once came away.

He remarked that months after the performance of amputation at the middle of the thigh, these necrosed pieces frequently come away; the fact is mentioned by Velpeau, Chelius, Syme, Erichsen, South, Gross, and others; but having met with no satisfactory explanation of it in these authors, he suggested the following:—

The occurrence of necrosis under these circumstances may be due, 1st, to inflammatory action in the medullary membrane, which prevents it from nourishing the inner half of the cylinder of the shaft of the bone; 2nd, to suppuration extending upward between the medullary membrane and the bone; and 3rd, to the nutritious artery (which often enters the bone below its middle) being cut off. In the last case the bone must be nourished by the collateral circulation established through the small arteries of the medullary membrane and periosteum, which enlarge for that purpose; but being contained in bony canals, they enlarge slowly, and before reaching the requisite size the bone dies. Ultimately, however, they do enlarge the medullary membrane, elaborating a bony wall within and the periosteum without; the sequestrum is thus imprisoned between the two.

Dr. Peaslee remarked, that if the affection of the medullary membrane produced this result, it would as likely occur when the amputation was performed at any other point where it existed; he believed the third explanation to be the correct one.

Diaphragmatic Hernia.—Dr. Finnell presented a diaphragmatic hernia, of which the following history was given:—Williams, a colored man, was severely injured about the chest and abdomen on the 24th of October. During the night epistaxis came on, which reduced him very much, and on the following morning he complained of his head and chest, saying that something had burst within him. Vomiting now set in, and continued to the time of death, which occurred on the eighth day. On the fourth day of his illness, his pulse was quick and weak, and countenance anxious; the skin was warm, and there existed great thirst. The apex of the heart was found on the right side, and the hand placed over the left, gave a thrill resembling that of an aneurism. On post-mortem examination, twenty-six hours after death, the stomach was found in the left pleural cavity pushing the lung as high as the third rib, and crowding the heart to the right side. In the diaphragm there existed two openings, one an inch in diameter, and the other the size of a goose quill; through one of these the stomach and transverse

colon had passed, and through the other a portion of omentum. The spleen, separated from the stomach, lay against the diaphragm—no trace of inflammatory action existed in the chest or abdomen. The openings in the diaphragm were circular, with hard, thickened edges.

Aneurism of the Coronary Artery.—Dr. FINNELL also presented the heart of a woman, 25 years of age, who had the day previous, while at work, fallen to the floor and died instantly. Upon post mortem examination, an aneurism of the right coronary artery was discovered. This, however, had not burst, and he could not account for the suddenness of the death.

Dr. Metcalfe thought that, as the head and abdomen were not examined, it could not be taken for granted that the aneurism had caused death.

Fracture of Patella.—Dr. CONANT presented a fracture of the patella of fourteen years' standing; the fragments were separated from each other about six inches, the upper *cul de sac* was from 1½ to 2 inches long, and the lower was obliterated. Little use was made of the limb during life; and in walking it was thrown forward mechanically.

Tumor of Abdomen.—Dr. CONANT also presented a tumor, which was taken after death, from the abdomen of a man; it had been attached to the ilium at its junction with the cæcum, and appeared to have existed between two folds of the peritoneum; it contained a thick, creamy, semi-fluid substance.

Dr. Metcalfe remarked that he had once seen a specimen somewhat similar, which was attached to the rectum by a pedicle. The differential diagnosis between one of these and ovarian tumor would, he thought, be very difficult. Dr. Metcalfe was requested by the President to examine the contents of the tumor and report to the Society.

SOCIETY OF STATISTICAL MEDICINE.

REG. MEETING, DECEMBER 10TH.—DR. PEASLEE, V. P., in the Chair.

Yellow Fever at Quarantine, New York.—The following is an abstract of a report of the cases of yellow fever treated at the Marine Hospital, Staten Island, during the last half-year of 1855, made by ELISHA HARRIS, M.D., Physician-in-Chief to that Hospital, to this Society.

Case 1.—J. M., an engineer from the Navy Yard, at Gosport, Va., admitted July 28th, third day after leaving the infected city. He was a vigorous and healthy man, æt. 23 years, a native of Vermont, an

engineer by profession, had never before resided in a district infected with yellow fever; resided with his family at Portsmouth, but worked at Gosport. His wife had left for the city of New York a week previously. Soon after her departure, he began to suffer from headache and general malaise, for which he sought medical advice and treatment, but with no alleviation. Under these circumstances he left, by railroad, for New York, and became very seriously ill while on the way. He proceeded to the residence of his friends on Second Avenue, obtained the services of a physician, and as soon as his case was made known to the Resident Physician of the city, was transferred to the Marine Hospital.

Symptoms.—Eyes deeply injected, suffused, and icterode; tongue tumid, with a dirty grey coating in centre; tips and edges clean, red, and of a raw appearance; lips tumid and red; skin sallow and lifeless in appearance; pulse, 60 per minute, very compressible, beating in short and feeble strokes, with long intermissions; only complaint—constant nausea and ineffectual efforts to vomit. He had suffered considerably from pain in the back, head, and limbs, and, at times, from pain in the epigastrium; but none of these symptoms were present at the time of admission; mind perfectly clear and calm.

Treatment.—Ice, in small particles, as the patient desired; ten grains of calomel, which alleviated the excessive nausea and retching; a warm epithem to abdomen, and the whole body carefully enveloped in a woolen blanket, and perfect quiet enjoined. After a few hours, a dose of fifteen grains of quinine was administered, and this was continued, in doses of six grains, every two hours. Before morning, the patient had an evacuation of a tar-like material from the bowels, and, early in the morning of the 29th, he vomited, very freely, the characteristic black vomit. At this time, fourteen hours after his admission, the pulse was at 60 per minute, and more feeble than on the previous evening, with more marked intermittence in the interval of the pulsations. Ordered emplast. vesicat. to the epigastrium; the ice and quinine continued. There had been no change in the patient's aspect, and he still complained of no pain.

During this day, the vomiting was frequently repeated, of the same character as the first; expressed great anxiety to hear from his wife, who was sick with a milder attack of the same malady, in the city; was fully conscious of his rapidly approaching dissolution, and before evening, he very calmly conversed upon the subject, and gave his last messages and directions. The eyes became more deeply injected and suffused, and the pulse more infrequent; during the night, was en-

tirely indifferent, except when roused by vomiting; the quinine was discontinued.

July 30th.—Pulse 56; more feeble; mouth and lips bloody; sputa tinged with blood. The vomited material contained considerable blood that had not assumed the granular condition in the stomach; no headache; mind perfectly clear, but lethargic. At noon, he repeated the directions given the previous day; at evening, he was sinking more rapidly, and at 4½ A.M., July 31st, he died.

During all his illness, the patient had expressed no anxiety or fear for himself; he took no food; tasted of wine once, and desired no more; he did not seem to be nauseated by the quinine; passed but four or five ounces of urine in the whole period spent in the hospital; never complained of any pain.

Autopsy 11 *hours after death.*—Cadaver slightly rigid, finely developed, and muscular; dark yellowish blood issuing from all the mucous surfaces; the skin intensely yellow, with some ecchymoses and vibices upon the sides, shoulders, extremities, and back; several patches of extravasated blood were observed about the calvarium, on stripping off the scalp.

Brain.—Meninges very much congested; surfaces of pia mater and arachnoid opaque, with imperfectly organized fibrin; arachnitis with profuse but imperfectly organized fibrinous exudation, observed throughout every portion of the membrane; about four ounces of bloody serum escaped from the base of the brain, upon removing the organ. Three ecchymosed or extravasated bloody patches were observed under the arachnoid; the lateral ventricles contained about two ounces each of yellow serum; there was a small quantity of extravasated blood in one; plexus choroides engorged with dark blood; substance of the cerebral mass presented a perfectly normal appearance, and was of normal consistence.

Thoracic Organs.—Pleura intensely injected; a small quantity of yellowish serum in the pleural cavities; lungs perfectly normal, with slight hypostatic congestion; heart normal in structure; pericardium containing an ounce and a half of yellow serum; no coagula in either ventricle, but a small quantity of fluid blood in the right; endocardium marked with small ecchymoses and bloody punctæ, that could not be washed out; dark fluid blood flowed freely on opening any of the venous trunks.

Stomach.—About half-a-pint of thick granular black vomit was found in the stomach; mucous membrane of an ash-grey color, when washed, and exhibited no marks of inflammatory action that were not

equally discoverable in all the tissues of the body. In the greater curvature there were several distinct and dark ecchymoses, and there was observed a roughened and elevated line or ridge, extending four or five inches across this portion of the stomach. There was one small ulcerated patch, but it was not of recent origin. The mucous membrane was not in the least softened or thickened; the villous coat was not injected.

Liver.—Was rather small in size; of normal consistence, and not structurally changed, so far as the eye could detect. Its superior surface was of a bright, nutmeg-yellow color, while the inferior surface was of a much darker hue.

The gall bladder was partly filled with a thin and dark green fluid; pancreas and the spleen were of normal appearance and structure; kidneys were markedly congested; there was but an ounce of urine in the bladder, and the mucous lining of this organ presented appearances very similar to those seen in the stomach,—there were slight ecchymoses from the same cause, the altered condition of the blood. The mucous membrane of the intestines was considerably congested, or passively engorged with venous blood, and presented the same ecchymosed appearances, as were observed in all other portions of the mucous tissue; the solitary glands were remarkably tumid and of a light color.

Case 2.—F. A., æt. 23, native of the U. S., seaman, admitted from steamship *Black Warrior*, Aug. 2nd. He had made several voyages on this vessel, which plies between New Orleans, Havanna, and New York. He became ill some four days previous to the arrival of the vessel at quarantine, and was reported unfit for duty. The second mate of the same vessel, was at the time very sick with the yellow fever, and recovered in this hospital, but no others on board had suffered any symptoms of the malady. The patient was a person of nervo-bilious temperament, thin in flesh, constitution considerably impaired. The surface of the body had a deeply icterode hue, augmented by a naturally dark complexion; conjunctiva deeply icterode and injected, the cornea brilliant, but the eyes suffused and destitute of expression. The tongue was perfectly clean, dry and cracked, with edges and tip of a dirty red color; gums swollen, and bleeding; vermilion border of the lips tumid, and bright red; pulse without volume and very frequent. He made great complaint of pain and discomfort, but without location except that the epigastrium was tender upon pressure; intellectual faculties were not obscured, though he appeared exhausted and stupid.

Treatment.—Patient was carefully enveloped in light coverings, and placed in a quiet part of the ward; ice allowed as freely as he desired, but no drinks. An epithem of hot wet flannel was placed upon the abdomen, where a strong sinapism had produced vesication; and cold, by evaporation, was applied to the head which was considerably above the normal temperature. Quinine, the only medicine administered, was given in solution, in doses of eight grains every third hour. During the twelve hours that he was under observation, preceding 10 P.M., there was no appearance of black vomit, but the hæmorrhagic condition of the gums and fauces led us to look for it. Before morning, however, he discharged the granulated vomit very freely. Aug. 3rd, pulse more feeble and about 100 per minute; disorganized blood issuing from the nostrils and mouth; eyes more lachrymose and icterode, eye-lids œdematous. Odor of patient, sickening and offensive. Treatment of previous day was continued until black vomit was freely discharged again, when the quinine was discontinued, and only ice allowed the patient. During the day and evening he continued to sink; black vomit was copiously ejected without effort, and from the bowels he had frequent discharges of the same material, with a larger proportion of blood that had not assumed the granulated condition. These discharges, after standing, assumed a semi-gelatinous condition. No urine was passed or secreted.

September 4th.—Patient nearly unconscious, pulse frequent and irregular; surface of body more deeply icterode, with purple ecchymoses and punctæ on all the depending portions; eyes suffused with yellow and bloody fluid, and upper eyelids swollen and dark purple; disorganized blood issued from the nostrils, mouth, and ears; odor of patient highly offensive; no vomiting during the two hours preceding the patient's death, which occurred about 10 A.M., six full days from the invasion of the malady on ship-board.

Autopsy four hours after death.—Cadaver flaccid, color of the surface intensely yellow, with purple punctæ diffused over the chest and limbs; small, circular, and dark purple ecchymoses thickly scattered over the depending portions of trunk and thighs; and disorganized blood issuing from all the mucous linings and outlets of the body.

The *brain* was carefully examined and found to present all the morbid appearances observed in the case of J. M., with the addition of more marked evidences of cerebral lesions, that seemed to have resulted from disorganization of the blood. The superior portion of both hemispheres of the brain presented a covering of dark extravasated blood between the pia mater and arachnoid, the patch covering the temporal

portion of the left hemisphere being much the larger and thicker. This was more than two lines in thickness, and both patches were partly composed of imperfectly organized fibrin. All this fibrinous and bloody exudation appeared to be very recent. The plexus choroides was engorged and covered with bloody exudation. The ventricles were distended with yellow bloody serum, and about four ounces escaped from the base of the brain, and the spinal canal; the cerebral mass was of normal consistence and appearance.

Thoracic Organs.—Normal in structure. There was nearly half a pint of bloody serum in the pleuritic cavities, and three ounces in the cavity of the pericardium. The pleuræ were not as markedly injected as in the case of J. M. The right ventricle of the heart, and the pulmonary artery, contained considerable semi-fluid blood, which was filled with bubbles of offensive gas; lining membrane of these cavities was stained of a dark and dirty red color, which could not be removed by washing.

Stomach.—A quantity, about eight ounces, of thick granulated black vomit was found in the cavity of the stomach. There was some thickening and softening of the mucous membrane, but no appearance of vascular engorgement of the tissues of the organ; no ulceration; several large ecchymoses. The *liver* was of a bright reddish yellow color, and considerably engorged with dark blood; a little thick bile in the gall-bladder. The *spleen* was small. The mucous lining of the intestines normal in appearance, but softened. No urine in the bladder, nor had the patient passed any while in the hospital.

Case 3.—J. C. G., æt. 30, a seaman from the U. S. Ship *Falmouth*, was admitted Aug. 14, at 11 A.M., had then been ill and unable to perform duty for twenty-six hours. The ship had just returned to this port from Havanna, and brought into quarantine the corpse of Midshipman Cain, who had fallen a victim to yellow fever a day previous to arrival.

The patient was a native of the United States, of excellent habits and previous good health. He had taken his rations regularly during the whole voyage, and had felt no illness until the morning of the 13th of August, when he complained of "pain in his bones," his back and his head, and at 10 A.M. turned into his berth, under the care of the surgeons of the ship, Drs. Brownlee and O'Hara. The invasion was unusually sudden; the stage of reaction had begun when treatment was commenced, and it lasted but four or five hours. During that period, calomel was freely administered, and it induced gentle catharsis.

Quinia was then administered, in doses of eight grains every three hours.

When placed in the hospital, twenty-five hours from the invasion of fever, he had already been brought fully under the effect of quinia. His pulse was at 68; full, but slow; skin was warm and dry; eyes injected and suffused; head hot and temporal vessels turgid. The skin was not yellow; lips red, tongue clean and red at the edges. The patient complained of pain in the back, head, and epigastrium, had just begun to suffer from nausea, but had not vomited.

Treatment.—Cups to epigastrium and back of the neck, with leeches to the nostrils, to avoid the danger of cerebral congestion. Warm fomentations were applied to the abdomen, an ice-cap to the head, and ice was given as desired by the patient. The ice-cap was continued, and leeches were re-applied to the nostrils, while the quinine was continued, and seemed to alleviate the cerebral heat and congestion. The quinine was continued during the 14th, and at the advice of Dr. Brownlee, during the 15th, with apparent advantage to the patient. During the night of the 15th, which may be remarked as the last twelve hours of the third day of the malady, the symptoms became more unfavorable; the headache returned with great severity, with increase of pain in the back and limbs, and the epigastrium. Pulse continued at about 60, and with increased intervals between the pulsations. Once during the evening, the patient vomited half a pint of flocculent material, without blood or any well-marked sediment.

During the 16th, the fourth day of the disease, there was no marked change in the symptoms; no vomiting, but an increase of epigastric tenderness; pulse continued to decline in force and frequency. During the fourth night he sank into a semi-comatose condition, and early in the morning of the 17th, nearly four full days from the invasion of the malady, he died without agony.

Autopsy six hours after death.—Cadaver muscular and flaccid; surface, yellow, with several small circular ecchymoses scattered over all the depending portions of the body. Disorganized blood was oozing from all the mucous surfaces and outlets.

The *brain* was carefully examined. A large amount of fibrinous exudation was observed upon the arachnoid, and less serum in the ventricles than in the case of J. M. In all other respects, the autopsy of this case corresponded with the particulars observed in the autopsy of Case 1. The *liver* was, perhaps, more deeply engorged with blood, but it presented the same appearance and color as in that case.

Case 4.—An unknown man, aged about 35 years, was brought into Quarantine, dead, on board the steamship *Roanoke*, during the evening of Sept. 16th, and was placed in our dead-house next morning. From the officers of the steamer, I learned that this man was put on board from a barge in the stream on the evening of the 15th, as they came down the Chesapeake, near to Old Point. All I could learn of the history of this case went to show that the man appeared quite vigorous at the time he boarded the steamer. He was a German, apparently a musician, had little communication with any one on board, except with a servant who furnished him with some tea at his request, and subsequently and repeatedly with gin, all which he was observed to vomit soon after drinking. He complained of no pain, and expressed no anxiety or fear, and died without agony about twenty hours after leaving Old Point.

Autopsy 18 *hours after death.*—Cadaver, well developed and finely formed; cicatrices of old buboes and chancres about the groins and genitals; the skin of a deep saffron yellow hue, with multitudes of petechiæ and small ecchymoses; large purple patches about the back and sides; disorganized blood issuing from the mouth and nostrils; conjunctivæ intensely icterode; lips, mouth, and tongue of dirty mud color, free from sordes, but covered with bloody exudation. The *brain* was carefully examined, as in the other cases, and the same appearances observed as in those cases. There was, perhaps, less fibrinous effusion than had been seen in former autopsies, but the arachnoid and plexus choroides were more intensely injected. The *lungs* were perfectly normal in structure, considerably engorged with dark venous blood; old pleuritic adhesions, and a few ounces of bloody serum in the pleuritic cavities. The *stomach* contained six ounces of well-characterized black vomit, which had the odor of spirits, from the gin that the patient had drunk. The *liver* presented a light reddish, olive yellow hue, both upon its surface and throughout its structure. It was much engorged with portal blood of a tar-like appearance and consistence. When a slice of the organ was pressed and washed of the blood, it had the color of a yellow, dead leaf of the osier willow. The *spleen* and *pancreas* were of small size and normal consistence. There was little bile in the gall-bladder, but a considerable quantity of dark yellow and thick fluid in the common duct. The *intestines* contained a considerable quantity of black vomit; the mucous membrane of the entire gastro-intestinal tract, considerably softened; but there were no pathognomonic evidences of previous inflammatory action. When the inter-

nal surface of the stomach and intestines was washed, it exhibited an ash grey color, and the rugæ had a natural and healthy appearance. The areolar tissue about the pyloric extremity of the stomach and the common duct was excessively œdematous and yellow.

After this examination, no doubt was entertained that the man died of yellow fever, and that, at the time he was put on board the steamer in the Chesapeake, he had probably passed through the stages of invasion and reaction, and being a "walking case" of the disease he ventured upon the voyage to New York.

The point at which this man boarded the steamer is about twelve miles from Norfolk, from which pestilence-stricken city he had probably fled. No one who saw him on board the ship suspected that he was suffering from yellow fever.

Case 5.—A German, æt. 33, a professional nurse, left Norfolk, Va., Aug. 20th, remaining a day at Philadelphia; arrived in New York on the evening of the 22nd, feeling quite well; had a slight rigor, and suffered some vague uneasiness that night, but felt quite well in the morning. About noon the following day, the 23rd, he was seized with a severe pain in his head, accompanied with general discomfort and a sense of prostration. These symptoms soon passed away, so that he felt quite easy, and slept that night. On the succeeding morning he felt exhausted, and sick at his stomach. He took no food, did not vomit, and had no pain during the day. On the evening of this day, the 24th, he was admitted as a patient in the Marine Hospital. He was then free from pain, expressed himself as feeling usually well, with the exception of some oppression about the epigastrium. Skin, cool and moist; pulse, rather frequent and feeble, but, in no respect indicative of any disease; tongue, tumid, and slightly, but completely furred; eyes, natural; excepting that the corneæ were brilliant, while the general expression was languid. There was not the slightest tenderness of the epigastrium, nor was there pain in any part of the body; surface of the body sallow, but not icterode, and the patient had the aspect of a person exhausted by protracted vigils. He desired neither food nor drink, and believed that his illness was trivial, probably but the result of fatigue and loss of appetite. He was placed in a quiet portion of the ward; calomel, gr. v. and rhubarb ℈j. were administered, and a satisfactory fœcal and bilious evacuation secured. He slept some during the night, and next morning expressed himself as feeling quite comfortable, complaining only of a sense of prostration. The eye presented the same brilliance of corneæ, combined with a lachrymose suffusion, as was observed the previous evening. There was not the

least epigastric tenderness, nor any pain in any portion of the body. He desired neither food nor drink; pulse, normal; tongue, nearly clean, and more tumid than when first observed. Treatment—Quinine, in doses of four grains every fourth hour, was ordered, and the patient kept quiet in bed, and supplied with cold water if he desired.

No change was observed during this day; patient slept more than half of the succeeding night, and on the morning of the 26th only complained of general *malaise* without pain, and with no new symptoms, except that the tongue had become perfectly clean at the tip and edges; urine normal in appearance, and of about the usual quantity. The quinine was continued, and no other medication attempted, as there seemed to be no indications to be met except such as those for which the quinine was exhibited. During the night of the 26th the patient did not sleep, became thirsty; failed to evacuate the usual amount of urine; had a hot, dry skin, and complained of some pain in his back. Sept. 27th, the symptoms of the malady were unequivocal and ample. There was considerable tenderness on pressure over the epigastrium; conjunctiva had become slightly injected and icterode; tongue perfectly clean on its edges; pulse more frequent, being above ninety; leeches were applied over the epigastrium, and the quinine ordered in doses of eight grains every third hour. At evening the patient felt relieved from pain, but the symptoms were otherwise as in the morning. During the following night he rested indifferently, and on the morning of the 28th the symptoms had in no respect changed for the worse, except that they all continued. The eight-grain doses of quinine were continued, and had a marked effect upon the pulse, rendering it slower and fuller for an hour or two after each dose. There was constant oozing of blood from the leech-bites, but not in an injurious quantity. The epigastric tenderness seemed to be alleviated when this local depletion was promoted. It was estimated that about 25 oz. of blood escaped from the leech-bites before the patient died. On the morning of the 29th, it was found that scarcely any urine had been secreted during the previous night; tenderness of the epigastrium increased some nausea; great prostration of strength, and in every respect an aggravation of all the symptoms. The edges and tip of the tongue had assumed a dusky red hue, the vermilion border of the lips had a similar but lighter color, and during the afternoon blood oozed from them quite freely; epistaxis occurred once. The surface of the body became rapidly and intensely icterode, and the eyes more deeply injected. There were frequent attempts at vomiting during the day, but no black vomit was ejected. The mind continued perfectly clear and calm, but

from the first, very lethargic; there was no cerebral heat or pain. Most complaint was made of the epigastrium and limbs; no quinine was given after the discharge of blood from the mouth commenced; ice only was allowed.

The patient died early in the morning of the 30th; a little less than seven days from the first symptom of the invasion, and about three and a half days after the symptoms had become positively pathognomonic. No black vomit was ejected at any time; the intellect continued clear until the last; no evidences of cerebral congestion had been manifested.

Autopsy six hours after death.—Cadaver slightly rigid; the surface of the body deeply icterode, and, upon the back and sides, dotted with circular purpuric spots, and punctæ over the chest and limbs. The *brain* was large; considerable bloody exudation, slightly fibrinous beneath the arachnoid, which membrane was engorged with dark blood, but there was less exudation of fibrin than in cases previously examined; lateral ventricles contained more serum than in any case we have hitherto recorded. This serum was intensely yellow; at the base of the brain it was bloody. The cerebral mass was of normal consistence and appearance. *Thorax*:—Old pleuritic adhesions; about eight ounces of bloody serum in the pleuritic cavities, and considerable in the pericardium. The right ventricle of the heart, and all the venous trunks were filled with imperfectly coagulated blood, of a reddish and very dark-brown color; and a small gelatinous clot of fibrine was found in the left ventricle. The *stomach* contained eight ounces of well-characterized, granular, black vomit; and a considerable quantity was found in the small intestines. The mucous membrane of the stomach and intestines exhibited an irregular hyperæmic appearance, was deeply ecchymosed in numerous and irregular patches, but no other alteration was observed. The *liver* was of normal size and consistence: of a bright yellow color on its surface, but of an olive-yellow hue when cut; it was engorged with portal blood, which, when washed out from a thin slice, left the hepatic substance of a deep yellow, dead-leaf color.

Remarks.—As regards the etiology of each of the foregoing cases of yellow fever, it may be observed that in case 1 and case 5, the patient had been immediately, and for a long time, exposed to the miasm that spread the pall of death over the cities of Norfolk and Portsmouth. Case 3 had been exposed to no other cause of the malady than such as existed on board the *Falmouth* at the time the ship left Havanna, more than two weeks before the disease appeared on

board in the person of the Midshipman, who died the day previous to the invasion of the fever, in G. The *Falmouth* touched and remained a short time at Key West, but there had been no yellow fever at that place. Case 2 had been recently exposed to the causes of yellow fever at New Orleans as well as at Havanna. I have been told that he was treated very freely with cathartics while on shipboard.

Treatment.—Though each of these fatal cases received all the benefit that we were able to procure, by the use of quinine, it is not believed that in any of them the medicine had much effect in protracting life; much less were there any evidences of any evil effects from the drug. Every dose of quinine that was administered appeared to produce a favorable impression upon the nervous system and the circulation. In no case was cinchonism induced, nor was any existing symptom aggravated by its use. In case 3, it is believed that the constant application of ice to the head prevented the occurrence of cerebral congestion, to such a degree as to render the post-mortem evidences of that condition less marked than in the other cases.

Morbid Anatomy.—In none of the cases did we find unequivocal evidence of inflammation in the stomach, or of any other viscus or tissue, unless the morbid changes observed in the brain be regarded as the results of inflammation. In all the cases we observed that the *membrana vasorum communis*, especially in the large venous trunks, exhibited traces of an apparent engorgement or hyperæmia, being of a dark color, with patches of ecchymosed surface; but upon close examination, it was evident that this appearance was owing to the straining and transudation or exosmose of the coloring matter of the blood that had circulated in the vessels. The lining membrane of the portal and hepatic vessels did not appear darker or more altered than in the pulmonic and systemic circulatory trunks.

The bloody extravasation from the arachnoid and the plexus choroides was presumed to be a mere transudation of disorganized blood. No organized coagula were found in any other place. The hematin of the blood seemed to be in a free state, as the blood stained everything with which it came in contact, in such manner that it was difficult to wash off the stain from the hand that held it for a time. The fibrinous exudations appeared less like fibrine than like gelatine. The muscular structure generally had a dusky, dirty, red color.

PART SECOND.

CRITICAL ANALYSIS.

ART. VIII.—*Deformities after Fractures.* By FRANK HASTINGS HAMILTON. (*Trans. Am. Med. Assoc.*)

Report on Dislocations, with especial reference to their results. By DR. FRANK H. HAMILTON, of Buffalo. (*Trans. New York State Med. Soc.*)

THE treatment of fractures and dislocations has partaken of the general improvement of the science and art of Surgery. Whoever will peruse authors of a century or two past, will be surprised at the changes which have been effected in this branch of practical surgery. Their works are illustrated with an array of instruments and apparatus, which John Bell truly says, are "not unworthy of the chambers of the inquisition." Adopting, from the Arabians, the theory, that all the deformities after fractures were due to an improper moulding of the callus, the continental surgeons of Europe, for centuries, adhered strictly to the precepts of their predecessors, in the treatment of these accidents. The proper test of the surgeon's skill was the accuracy with which he applied a given number of bandages and splints. These dressings once adjusted were not to be disturbed until a given day arrived, no matter how great their inconvenience. Says Verduc, "Let the patient cry or roar ever so much, this is still a certain rule, that if your bandage is right, all the most considerable pain will cease in twenty-four hours; for such patients make a great deal of noise and whining for a trifling pain." This cessation of pain, however, but too often marked the existence of gangrene, as their works all prove; for gangrene is always mentioned as a frequent result of bandaging.

Improvement in the science of surgery was necessarily followed by a more rational practice; the belief that the shape and amount of callus determined the degree of deformity, gave place to the more rational belief that these results were due to mal-position of the limb This doctrine was carried so far by Pott, as to dispense with all

dressings, and trust entirely to the position of the limb; the position sought being such as would afford complete relaxation of the muscles. Between these extremes, of trusting entirely to bandaging and simple position, lies the "golden mean" which modern surgery has seized.

But, notwithstanding all the modern improvements in the treatment of fractures and dislocations, it becomes us to institute the inquiry, What are the results of modern practice in the treatment of these accidents? In what proportion of cases do we restore to our patients perfect limbs? These questions have far greater significancy in modern than ancient times, and to American than European surgeons; for in our day the surgeon's practice is more critically scanned than formerly, and, in this country especially, he is amenable for failures in practice to courts of law.

It is with pride we record the fact, that the first attempt to determine these questions by rigid investigation, was by an American surgeon. It is true, that these published results are an honest confession of the *failures* of the art of surgery in this country, which indeed are lamentable, but until other countries make a similar exhibit, we are justified in presuming, that in these papers not far from the actual results of the modern treatment of fractures and dislocations are faithfully recorded.

This investigation we regard as very timely, for the profession is beginning to be agitated with the question of protection from the inquisition of courts of law. And what is the surgeon's best security from prosecutions for failures in his practice? Not a change in the laws which merely hold him responsible for gross ignorance or neglect in the practice of his profession, but the establishment of the standard of the correct treatment of disease. As far as relates to fractures and dislocations, the statistics of PROF. HAMILTON go far towards assisting us in the formation of an opinion as to the average success of their treatment. If these results are reliable and actually correct, they must create a standard by which our practice is to be guaged. If deformity is the average of success in the treatment of any individual fracture, no surgeon can legally be held responsible for similar results, provided he has shown a proper degree of care. Hence their value in cases of prosecution must be incalculable. Already we are aware of one suit, which was decided in favor of the surgeon, from an examination by the Court and Jury, of Prof. HAMILTON'S former statistics of the results of fractures of the leg and arm.

We are glad to learn that Prof. HAMILTON designs to expand these several reports into a treatise upon fractures and dislocations. The

statistics accumulated with so much labor and pains-taking, form an admirable basis for such a work, and, we trust, the day is not distant which will realize the author's intention.

It must be premised that Prof. HAMILTON does not give us simply the results of his own practice; he has, on the contrary, selected his cases from those treated by well-qualified surgeons. His examination of such cases has always been personal, and his records accurately made at the time.

Ossa Nasi.—Number of cases, 22: perfect, 4; imperfect, 18. In but 13 cases was a surgeon in attendance, and of these, 3 died within a short time; in 2, the nature of the injury was not recognized; in 8, attempts at restoration, were immediately made by qualified surgeons; of which number, 5 had perfect recoveries. This accident appears to be very often overlooked, both by patient and surgeon. In the restoration of the nasal bones, the author states that a smaller instrument must be employed than a female catheter. Union of these fractures are very prompt, often taking place in a week.

Septum Narium.—Number of cases 7; all imperfect. In none of these accidents was treatment employed, and in 3, no surgeon was in attendance.

Ossa Maxilla Superiora.—Number of cases, 6: perfect, 1; imperfect, 5. The treatment of these cases depends upon the character of the fracture. The fragments should not be hastily removed, as they have a strong tendency to unite. When the malar bone is depressed upon the antrum, Prof. HAMILTON advises to cut down, externally, and raise it with a screw levator, instead of passing an instrument upward round through the socket of a tooth, and thus elevating it to its position.

Maxilla Inferior.—Number, 18: perfect, 10; imperfect, 8. These fractures are rapidly repaired, and according to our author's experience never fail of union.

Clavicle.—The fractures of this bone are divided into incomplete and complete. Number of incomplete, 14; imperfect, 5; perfect, 7; not noted, 2. Boyer denied the existence of this fracture. Prof. HAMILTON not only recognizes it, but thinks there are two forms; one attended with, and the other without, lesion of the periosteum. He is even still more refined in his classification, for he describes three other interperiosteal fractures; the first being a mere band, the fibres on one side being expanded, and on the other compressed. Second, a fracture of the central fibres of the bone only. Third, fracture of the middle and outer

fibres on one side, but within the periosteum. The author remarks: "It is certain that these several injuries do occur;" but it is proper to add that he has never *demonstrated* them by dissection. Complete fractures of the clavicle are divided into those occurring at the middle, inner, and outer thirds, and the comminuted. By far the most frequent seat of fracture appears from Prof. HAMILTON's collection to be at the junction of the middle and outer third. They also prove the general assertion of authors correct, that these fractures usually unite with deformity. The author prefers Fox's apparatus. In an appendix are several illustrations, showing American inventions and modifications of apparatus for the treatment of fractured clavicles.

Results of Dislocations.—In our notice of this report, we shall simply copy Prof. HAMILTON's observations upon each variety of dislocation introduced, as his remarks are a sufficient commentary upon these different accidents. He thus introduces this report:—

It is equally true of dislocations, as of fractures, that neither general treatises upon surgery, nor monographs, have informed us sufficiently as to the results of these accidents. There is no lack of excellent instruction in the rules of diagnosis, or in the laws of treatment; but of the frequency of non-reduction and its consequences, of the amount and character of the maiming which is likely to ensue where the reduction has been effected, and of the length of time during which such maiming may be reasonably expected to continue, there is, I think, a palpable deficiency of information.

The young surgeon experiences, therefore, a constant embarrassment when interrogated as to the character and sum of the injury which the patient is to sustain; and what is more unfortunate still, I fear, if he entertains any opinions upon the subject, they are in general quite too favorable.

It is not difficult to see how the utterance of a favorable prognosis, which the result does not confirm, will lead to a distrust of the skill of the surgeon, if it does not establish in the mind of the sufferer a conviction of mal-practice. But still more certainly will the patient accuse us of ignorance and unskillfulness, if, in any case of a simple dislocation, we fail entirely to reduce the bone. It will be in vain, now that the mortified surgeon shall appeal to his printed volumes for justification, since he will seldom find any mention of failures or of unfortunate results; and I suspect his neighbors will not have any cases so unlucky as this one, with which to countenance and console him.

In this view alone the subject of "results" in dislocations is of sufficient importance to demand our attention. But there is another view in which it may be claimed to possess equal, if not greater interest. If it shall be found that other things being equal, certain results, more or less grave, pretty uniformly follow upon certain modes of reduction, we may hereafter choose with better judgment between the different procedures where more than one plan has been recommended, and be led

to devise new modes where no choice exists; and, moreover, I need scarcely add, that we shall be better able to declare what of the maiming is intrinsic to the accident, and what is attributed to treatment.

REMARKS.

Clavicle.—Of the nine collar-bone dislocations, eight occurred at the acromial or distal end, and one at sternal or proximal end. Of the former, seven were dislocations upwards, the bone being merely lifted from its articulation, but not made to ride over the scapula. In one case, (No. 8,) the dislocation was upwards and outwards, and must have been accompanied not only with a rupture of the capsular ligaments, as in all of the other cases, but also with a rupture of the coraco-clavicular ligaments, without which so much outward displacement cannot occur.

In most of cases the clavicle was easily reduced, but in no instance was it made to remain in place, not even measurably; the displacement being always as great after treatment as before. In all cases, except No. 3, where the result has been ascertained, the functions of the arm and shoulder have been more or less impaired, yet, generally the impairment has been trivial.

I am quite sure that it will not be found often, if ever, practicable to retain the scapular end of the clavicle in place when it has been once dislocated; and that the same difficulty will generally exist when the dislocation is at the sternal end.

Humerus.—My records furnish me with 44 cases of dislocation of the head of the humerus, of which 30 were downwards and 14 forwards. Of the whole number 38 were reduced, two of which are supposed to have become reluxated, and so remained at the time of my examination. Of the five which were never reduced, case 16 was recognized immediately, but the attempt to reduce it, on several consecutive days, failed. Cases 19 and 27 were not seen by a surgeon until some time after the accident. Case 44, complicated with a fracture of the same bone, was seen by a surgeon, but the accident not recognized. The history of case 28 is not known. About one-fourth part of the whole number now in place were reduced immediately, or within a few hours, and the remainder at periods varying from one day to eight weeks. In only three or four of the first class of cases were anæsthetics, or the mechanical appliances used, and in five or six of the latter. Two of the luxations were complicated with fracture of the same bone, and one was compound.

It will be observed that the procedures adopted by myself in the reduction of recent cases has been much varied in different cases, and sometimes in the same case, but that the reduction has been generally effected while pulling upon the arm outwards, and a little downwards from the line of the body. In some cases the extension has also been made successfully at right angles with the line of the body, and in others directly upwards and over the head, and in others manipulation alone, without extension, has been employed. But whatever direction has been adopted in the extension, I have never omitted to make a direct application of the counter force to the scapula, through the

GENERAL LIBRARY University of MICHIGAN

acromion process, which I regard as vastly more effective than any counter force applied to the axilla, and to which, indeed, I have generally observed that the successful result was due. The necessity of avoiding the axillary margin with the heel, or the counter extending force, is well enough understood, but I doubt whether surgeons have sufficiently appreciated the difficulty of doing this, or, indeed, the complete impossibility of making here any effective pressure against the scapula, even though the heel shuns the muscular margins, and buries itself however deeply in the axilla. A moment's attentive consideration must convince us that by this procedure the scapula may be lifted outward from the body, but not certainly carried backwards in a direction opposed to the extension. If, therefore, the heel in the axilla serves any useful purpose, it must be as a fulcrum; it may also serve some useful purpose as a mode by which both the patient and the operator may be steadied while extension is being made at the forearm.

It is against the end of the acromion process, therefore, that I have always sought to make counter-extension when pulling downwards or outwards, and against the top of the scapula when pulling upwards.

I am aware that in this I am making to you, gentlemen, no new suggestion, but you will pardon me if I wish to impress upon you the full value of the principle.

The usual appliances for confining the scapula, such as a band across the acromion process, or a sheet with a fenestrum through which the arm is thrust, etc., I have found generally unreliable, and I have preferred the fingers or the hands of a stout assistant, or my own foot.

In one case only (case 20) have I resorted to the practice first suggested by Nathan Smith, of making the counter-extension from the opposite arm. The reduction was accomplished easily. I have no doubt of the correctness of the principle upon which the suggestion is based.

In several instances my attention has been called to a remarkable fullness in front of the head of the bone, which has continued for many months after the reduction has been effected, the patients having in some cases applied to me to know whether this did not indicate that the shoulder was not properly set, since, it seems, upon casual inspection, like a partial forward displacement of the head of the bone, and which seeming is the more conclusive because there is often a corresponding flatness or depression behind. Yet a careful examination has proven that this fullness is not due, in any degree, to the position of the head of the bone from non-reduction of the bone or laceration of its capsule. It is equally present where the elbow is carried forwards, and when consequently the head of the bone is thrown back in its socket, as when the elbow is carried back. It has been observed as often, also, as will be seen by reference to the cases, where the luxation has been downwards into the axilla as when it has been forwards. While I am not prepared fully to explain the cause of this phenomenon, I am disposed to regard it as a purely *muscular* fullness, and as having relation only

to the injury which the pectoralis major, or, perhaps, some portion of the deltoid muscle, has sustained.

I am certain that muscular contraction and rigidity is the most frequent cause of the complete anchylosis, as well as of the minor embarrassments to freedom of motion, which so often ensue upon those accidents, and which I would term *muscular anchylosis*, to distinguish it from those few cases of anchylosis which result from fibrous adhesion about the joint. In but few instances immediately after the reduction has the patient been able to lift the arm, by his own volition, to a right angle with the body, yet in every instance it could be lifted, without causing much, if any, pain, by the surgeon. The muscles, either by the displacement or in consequence of the means employed to reduce the bone, have suffered serious injury, and the present paralysis, where indeed it is not due to lesion of some nerve, must in some measure foreshadow the future contraction and rigidity.

In cases 27 and 28 of unreduced downward luxations, the patients could carry the elbow back much further than they could forwards; and in case of a forward luxation the same thing was observed, while in four cases a general muscular anchylosis occurred, which lasted many months, and during which time motions of the joint were nearly or entirely lost, the scapula moving always with the humerus. In each case, however, after a period longer or shorter, the motions of the joint gradually returned.

The application which I propose to make of these facts is, that the head of the humerus may be displaced after a reduction has once been well accomplished, by the mere force of a gradual muscular contraction, steady and long continued, and without the aid of extreme violence, or the intervention of sudden spasm; and that in case of an unreduced shoulder, we are not forced to conclude that it has never been properly reduced, because it cannot be shown that any new accident has occurred, or that the patient has had spasms of the muscles, or that he is subject to such dislocations from trivial causes, or, indeed, although the subject was not himself conscious of a sudden escape of the bone, since in such a case, the bone, stayed and supported on each side by muscles in a state of extreme rigidity, would move from its socket by the slightly preponderating action of one set, so quietly and silently as not to be observed.

My attention has been called, also, to the subject of the sound or tactile sensation produced in the reduction of this bone, and especially in reference to the medico-legal question, whether those present in the room, and not assisting in the operation, could have heard the reduction, and thus have become more competent to testify to the fact.

It was upon this point, so material to both parties, that medical gentlemen were not agreed in the case of ——— *vs.* the late Professor James Webster.

I find that in most cases there was a tactile sensation palpable to the operator and his assistants, and not always very easily distinguished from the sensation of audition, while in several cases there was an audible snap, heard distinctly in all parts of the room, but never was the snap audible where anæsthetics or mechanical appliances were used. Under

these latter circumstances a snap or a sudden slipping may occasionally be felt, but never heard.

Radius.—I have recorded 13 cases of dislocation of the head of the radius, of which 11 were forwards and 2 backwards. My experience, therefore, does not correspond with the experience of Gibson, Boyer, Chelius, B. Cooper, Guthrie, and others, who have met with the dislocation backwards much more frequently than the dislocation forwards.

Of the whole number of dislocations, backwards and forwards, of the head of the radius, seven were reduced immediately, or soon after the accident, yet only five remained reduced. Case 6 was reluxated by an attempt on the part of the father to straighten the arm, and case 14 was accompanied with a fracture which would not permit it to remain in place. Those which remained reduced have resulted in useful and nearly perfect arms. Of the eight unreduced, one was reduced after eight months, and continued in place; four, I think, were not recognized as dislocations at the time of the accident, although examined by surgeons; two were recognized, but the surgeons failed to accomplish the reduction; the remaining two were reduced, but became again displaced. These cases, so unfavorable to our art, since only 6 of 13 are permanently reduced, demonstrates, however, not so much the difficulty of accomplishing the reduction in cases of simple dislocation, as the difficulty of making the diagnosis. Surgeons are not agreed as to what is the usual position of the forearm, as to supination or pronation, in the dislocations of the head of the radius. I have examined more especially, in reference to this question, the unreduced cases. In cases 1, 7, and 8, of forwards luxation, the forearm was found forcibly proned; in case 3 it was in a condition midway between supination and pronation, and in no case, of either recent or ancient luxation, have I found it supined. I found the arm proned also in case 13 of dislocation backwards. I have seen but one dislocation of the lower end of the radius, and this was not complete (case 14).

Ulna.—No cases of luxation of the ulna have been recorded. I do not remember ever to have seen a dislocation of the upper end of the ulna without, at the same time, a dislocation of the radius. Nothing is more common, however, than a diastasis of the ulna and radius at their lower ends, or perhaps quite as frequently it may be regarded as a diastasis of the ulna and carpal bones through a rupture of the internal lateral ligament, in consequence of which the styloid process of the ulna is made to project slightly outwards, and occasionally forwards or backwards. This partial separation occurs, I believe, in all cases of fracture of the lower end of the radius, accompanied with displacement of the fragments, and in most cases where no such displacement exists. In twenty-four cases of this fracture, recorded by me, no exception to this rule is mentioned. In some instances the projection is, however, very trivial, while in others it is very striking.

The same thing is present after the majority of severe sprains of the wrist joint, and it is not unfrequently observed in both of the

wrists of old persons; occasionally, also, it is observed in those who are younger, but of a lax and feeble habit, with whom it exists not as a consequence of any accident, but only of that preternatural laxity of the capsular and ligamentous structures, which may produce equally a splaying of the foot or a yielding and diastasis of any of the articulations.

Accompanying the displacement there is, also, unusual mobility of the lower end of the ulna, so that by moderate pressure the deformity may be sensibly diminished. But I have never seen any permanent good derived from either splints, or bandages, or compresses, or from any other mechanical means which have been employed to retain the bone in place. On removal of the pressure the deformity has always returned, and I think always in the same degree as before.

Radius and Ulna.—Of the twenty-one dislocations of the radius and ulna, eighteen occurred at their upper ends, seventeen of which were dislocations upwards and backwards.

Eleven of the upward and backward dislocations were reduced; one of which, however, (case 17,) did not remain in place.

Of the eight unreduced dislocations, two were treated at first by empirics, and the nature of the accident was not ascertained. Five were examined and treated from the first by intelligent surgeons, who, in cases 1 and 6 supposed them to be fractures of the lower end of the humerus, and in cases 2, 3, and 15, recognized the dislocations, but were unable to reduce them. Whether in either of these three latter cases the dislocation was complicated with a fracture of the coronoid process, I am unable to say. In case 17 the coronoid process was probably broken.

Three dislocations have occurred at the lower ends of these bones, of which one only, (case 18,) was complete. This was a compound dislocation, and terminated fatally on the fourteenth day.

Metacarpal Bones.—The report contains two of these cases, both of which remain unreduced.

Thumb.—Seven cases of dislocation of the thumb are given. Of these, all were simple, and were never reduced, no attempt being made —two reduced immediately and perfect; three reduced immediately, two of which became anchylosed; one was dislocated a second time, and remained so.

Femur.—The three recent cases of hip dislocation were reduced by the ordinary methods, namely: by extension and counter extension, with pulleys. In relation, therefore, to the mode of reducing dislocated hips by manipulation alone, I have no experience, and of its value I do not feel competent to speak in any manner authoritatively. Yet I confess that notwithstanding occasional reports of reduction by this mode from different sources, I have felt some hesitation in admitting its general applicability; and I have ventured to express the opinion that at last, and after a fair *concours*, it would be found to be of limited application. A paper, however, from the pen of Dr. Thomas M. Mar-

koe, one of the attending surgeons to the New York City Hospital, and contained in the January number of the New York Journal of Medicine, for the present year, has very much abated my skepticism, and I am encouraged to hope that this process, when the principles upon which its success is dependent have been more fully determined, will be found in a majority of cases both safe and practicable.

Of the six dislocations recorded by me, only two are now reduced. Case 2, however, was accompanied with a fracture of the upper margin of the acetabulum; case 4, was not seen by a surgeon, and no attempts at reduction were made until after a long time; case 3, was seen by a surgeon, and the nature of the accident was misunderstood; and case 5 was seen the next day, and reduction attempted, but without success.

The result, therefore, is more favorable for surgery than at first the final summary might seem to indicate, since in only one recent case, uncomplicated with fracture, did the surgeon fail. Whether the distinguished operator in this case, Chelius, of Heidelberg, would have succeeded better by a resort to judicious manipulation alone, I cannot say. The patient assures me that it was not tried.

Tibia.—Of the seventeen dislocations of the tibia, the whole number occurred at the lower or distal end. Sixteen were dislocations inwards; the only remaining dislocation, case 17, being a dislocation forwards. Of the sixteen inward dislocations, seven were complicated with fracture of the fibula; six with fracture of the fibula and malleolus internus; three were compound and complicated with fractures also. Two of the compound dislocations resulted in amputation and recovery; one was not amputated, and the patient died. Of the fourteen dislocations which were complicated with fracture, but not compound, two remain unreduced and only four are known to have left no permanent deformity.

No cases of dislocation of the lower end of the tibia outwards are recorded, since all displacements of the tibia outwards must involve a displacement of the fibula also in the same direction.

In every instance the dislocation of the tibia inwards has been accompanied with a fracture of either the fibula or of the malleolus internus, or of both. I think, however, I have seen two or three inward dislocations of the tibia without a fracture, but I find no record of such cases, nor does my memory enable me to recall them.

In classifying dislocations of the ankle, I have adopted the usual nomenclature, and have named all those dislocations in which the tibia projects inwards from the foot, "inward dislocations of the tibia," yet I have some doubts as to the propriety of this appellation. This accident seems to me to have been in general rather a lateral *rotation* of the foot upon the lower articulating surfaces of the tibia and fibula. Of all the ginglimoid joints, the ankle approaches most nearly in form to a ball and socket joint, in consequence, especially of the marked prolongations of the malleolus internus and externus. In other ginglimoid articulations, lateral displacements are not unfrequent, but lateral rotation can scarcely by any accident occur. Here,

however, the reverse holds true; lateral displacement is difficult, while lateral rotation is comparatively easy of accomplishment.

The majority of cases which occur involving a disturbance of the relative position of the ankle joint surfaces, are, I am satisfied, of this latter character, viz.: lateral rotations within the capsule, and other than true dislocations; and although the restoration of the joint surfaces to position, is, in general, easily accomplished; yet, in consequence of either a fracture of the fibula, or malleolus internus, or of a rupture of the internal lateral ligaments, it will almost always happen that some deformity will remain. The fragments of the fibula will fall inwards towards the tibia, and the foot unsupported by either its fibula, or its internal ligaments, will incline perceptibly outwards. Nor can this be prevented, usually, by any mechanical contrivance. Indeed it would be easy to demonstrate, as I have often done to my pupils, that even Dupuytren's splint, usually employed in this accident, must fail of success in a great majority of cases; since the subsequent deformity is due, less to the fracture of the fibula and its consequent displacement, than to the loss of the internal ligaments, which loss nature can seldom fully repair. The whole apparatus of the joint has suffered greatly, and its form and functions, therefore, are not likely to be completely restored, whether the fibula has participated in the injury or not.

If, however, it were true that a fracture and displacement of the fibula is the sole, or essential cause of the subsequent deformity, it would still be found generally impracticable to avoid the maiming, since it would still remain impossible to lift the broken ends from the tibia, against which, or in the direction towards which, they are so prone to fall. Inversion of the foot does not accomplish it, nor have I ever been able to make anything but the most trivial impression upon the upper end of the lower fragment by pressure upon the lower extremity of the fibula.

I think too much confidence have been placed in the efficiency of "Dupuytren's splint." I believe, indeed, that this splint ought generally to be preferred as a means of support and retention, after this accident; but I doubt whether it is able to accomplish more than a moiety of all that its illustrious inventor proposed.

In two, only, of all the cases reported, am I quite certain that there was an actual internal displacement of the tibia upon the astragalus (4 and 5); but even in these cases it seems probable that the displacement was not complete, but that a small portion of the articular surface of the tibia continued to rest upon the astragalus. In neither of these instances was reduction ever accomplished. The cause of this failure I am not able to explain.

If, therefore, we confine ourselves strictly to those cases in which it is certain that the internal dislocation was complete, there remains only the barren and unfortunate record of the three compound luxations; cases 6, 13, and 16, of which one died, and two recovered after amputation.

Tibia and Fibula.—Of these there are four cases reported; two were displaced outwardly, and two backward; one attended with frac.

ture of the fibula; remainder simple. Two were reduced and recovered; one became partially displaced; one unreduced, being caused by rheumatism.

Tarsal Bones.—Two cases; one astragalus forward, compound with fracture of femur, fatal on 10th day; second, cuboid forward, simple, partially reduced immediately; quite lame after one year.

ART. IX.—*The Transactions of the American Medical Association.* Instituted 1847. Vol. viii. Philadelphia. 1855—pp. 763.

The Transactions of the American Medical Association have again made their appearance with commendable promptness and dispatch. The early publication of this volume must give great satisfaction to its annual subscribers, who fairly represent the reading portion of the profession, of the different sections of the country. The delay of nearly a year after the session of the Association, before the issue of its transactions, as formerly, lessened the interest of contributors to its pages not less than its general readers. This change is due to the transferrence of its publication, in 1854, from Philadelphia to New York. And, however much some may have opposed the change, all must agree that it has insured an earlier period of publication of this annual volume.

There will, we think, be this objection to the proposed publication of the transactions at the city where the Association last holds its meeting, that the volumes will not be uniform either in style of typography or binding. This is seen in the volumes of '54 and '55; and the difference will, doubtless, be greater hereafter. We hope our fears may not be realized, and, that, while other cities enjoy the honor, as well as labor, of issuing the transactions of the session held in its locality, the uniformity of the series may not be broken by a change of publishers.—Each volume should represent the highest style of the typographical art in this country.

The Address of CHARLES A. POPE, *President of the Association.* The address of DR. POPE is a brief but very sensible production, containing suggestions of importance relative to the interests of the Association. These are as follows:

A more lengthened session, to give time for a full discussion of the numerous reports, papers, and subjects brought before it.

The proposal of subjects for discussion a year in advance, to give opportunity for thought and preparation.

The selection of a place for the permanent meeting of the Association.

Report on the Diseases of Missouri and Iowa; by THOMAS REYBURN, M.D., of St. Louis, Mo.—This is the most lengthy communication in the volume, extending over 240 pages, and still it is but a partial report. It is a most elaborately written paper, containing communications from a large number of physicians, who have generously responded to the call of the Chairman for information. The associates of DR. REYBURN are DR. JOHN EVANS, of Chicago, Ill.; DR. JOHN F. SANFORD, of Keokuk; and DR. JOHN H. RAUCH, of Burlington. We shall not attempt an analysis of this report, which abounds in matter of local, rather than general interest. We trust its learned and laborious compiler will not weary of his task, and that in a future volume we may welcome its completion. It will then be a most valuable sanitary survey of that magnificent territory, which is hereafter, we believe, to be the theatre of the highest industrial, social, and intellectual development of the human race.

Report of the Committee on the Hygrometrical state of the Atmosphere in various localities, and its Influence on Health; by SANFORD B. HUNT, M.D., of Buffalo, N. Y.—DR. HUNT has been unable to report upon the variations of humidity of the atmosphere in other localities than those of his immediate neighborhood, and hence his paper contains but few facts of importance bearing upon this subject. He has, however, given an interesting general survey of the humidity of different regions of the United States, which will repay perusal.—We shall notice only the author's conclusions relating to the following questions:

1.—*Does a deficiency or excess of humidity produce a direct effect upon the health of the individual?*—The conclusion is, that a small actual weight of vapor in the air is not, then, sufficient to impair health; but a "combination of small actual weight, with great capacity for absorption, as on a mountain, would render prolonged existence impossible, simply from its evaporative effect." He is inclined to believe that a high dew-point, with a low fraction of saturation, is not sufficient to cause disease.

2.—*Can an excess of humidity, that is, a high dew-point with a high fraction of saturation, of itself, and uncombined with other causes, act as a direct cause of disease?*—Dr. Hunt's investigations lead him to doubt if high humidity, as an uncombined cause, can give rise to zymotic diseases; but he considers it certain that high heat and humidity combined, have a direct effect upon the progress of an epidemic, when once established. The inception is due to a special cause, its progress to the relative humidity of the air. He cites the

papers of Prof. Blodget, and Dr. H. D. Swift, published in the *New York Journal of Medicine*, the former on *The Climatic Conditions of the Summer of* 1853, the latter on *Coup de Soleil, or Exhaustion from the Effects of Heat.* These articles contain the history of an epidemic (so-called) of Sun-Stroke in this city in the Summer of 1853. During its prevalence, there was a remarkable high degree of heat, combined with excessive humidity. Dr. Hunt inclines to the theory of Dr. Barton, of New Orleans, that a high dew-point, combined with certain "terrene causes," are essential to the prevalence of epidemics.

The report of Dr. Hunt is devoted to an extremely interesting and important inquiry, and we hope the author will prosecute his investigations to their completion.

Report on the Diet of the Sick; by Charles Hooker, M.D., of New Haven, Conn.—The paper of Prof. Hooker is an elaborate review of the subject of Dietetics. After noticing briefly the physiology of nutrition, the author discusses the *General Principles and Common Errors of Diet*, at considerable length. The following rules are deduced therefrom:—1. In eating, sufficient time should be allowed for perfect mastication and insalivation. 2. Solid food should constitute the greater proportion of the diet. 3. An excessive quantity of drink is to be avoided. 4. Food should be taken at regular times, and with proper intervals. 5. The diet should consist of a variety of food. 6. The diet should consist of both nitrogenized and non-nitrogenized aliment in due proportions. The concluding part of the report is devoted to the *Rules for diet in particular diseases.*

1.—*The Diet in Dyspepsia.*—The reliance for cure of this disease is stated to be on appropriate diet. "Regular meals taken slowly and with perfect mastication," the writer remarks, "a rigid abstinence from drinks, and a cautiously increased variety of diet, constitute a simple prescription for dyspepsia, which, with appropriate medication, will rarely fail. Instead of a definitely prescribed course of diet, the patient should be encouraged gradually to train the digestive organs to the use of all common kinds of food. Plain and easily digested food should be at first selected, but, with frequent change, avoiding the continuance from day to day of any one favorite dish. The weak and irritable organs must not be suddenly crowded and disturbed by unaccustomed food, but articles which prove offensive, and cause uneasiness, instead of being discarded, should be again and again tried, until the intolerance of the stomach yields."

2.—*The Diet of Phthisis.*—The following errors of diet the author

has commonly noticed in phthisis. 1. Irregular eating. 2. A restricted variety of food. 3. The avoidance of oily nutriment. 4. Excessive use of drinks.

3.—*The Diet in Typhus Fever.*—Dr. Hooker considers a judiciously regulated diet of great importance in typhus: regulation of the digestive function and the nutrition of the system cannot be neglected without injurious consequences. He believes that if the appetite is encouraged early by a continued regular use of food at customary times, it need not be wholly lost. But as the physician is not usually called until several meal-times have passed, the consequence is that "the digestive organs, their natural stimulus being withheld, cease to perform their accustomed offices; their secretions are suspended, the appetite is lost, and these organs, especially the gastric mucous membrane, become irritable and inflamed. To obviate this "morbid condition of the digestive organs, and to restore their natural action," the proper means are "alterative medication and a regular use of food." Calomel in one full dose, or in frequent small doses, and in some cases an emetic, answer the former indication; and a small quantity of dry nutritious food, "such as dry toast or crackers," used at regular times of meals, meet the latter. Regularity in the administration of food is strongly insisted upon. The writer gives the results of his treatment of typhus for the last two years, as follows: Number of cases, 195; deaths, 8. He adds, that in the Connecticut Hospital, where this plan of dieting is followed, the average mortality of typhus for twenty-three years, has not exceeded four per cent.

4.—*The Diet in Dysentery.*—In this disease we have the same instructions in regard to diet as in typhus; regular meals of light, solid food, etc. The author's success in the treatment of 223 cases of severe dysentery, in 1849, was 96 per cent. of cures. In 1854, however, he lost about 8 per cent.

5.—*The Diet of Nursing Women.*—We have in these cases the same recommendation as already noticed, viz.: regular meals of solid food, without drinks. The nursing mother should abstain from the too free use of liquids, as it impairs the quality of the milk.

Report on Scrofula; by Wm. H. Byford, M.D., of Evansville, Ind.—This report is a lengthy discussion of the Nature, Etiology, and Treatment of Scrofula. It is a well-written paper, but as it contains no new facts of practical interest, we shall not attempt an analysis.

Report on the Means of Preserving Milk, etc.; by N. S. Davis, M.D.—This report relates principally to the method of solidifying milk, as practised by Mr. Samuel T. Blatchford, of Dutchess Co.,

N. Y. This milk has already been made the subject of a report, by a committee of the *Academy of Medicine*, of this city. As we have not before alluded to that report, we will here introduce an extract, showing the value of the article when thus prepared:

"We have traced the milk of the rich pasturage of Dutchess County, from the udder to its final conversion into the solid tablet; and we find it, in all its stages and appliances, to be based upon a thorough knowledge of the chemistry and dynamic tendencies of the natural fluid. It is not within our province, nor would it be proper here, to detail the steps of this operation; and it will suffice for this to state that the article called "*Solidified Milk*," obtained from that locality, and presented to us for examination, is nothing but the solid constituents of pure milk, combined with a little less than an equal part, by weight, of white sugar; that it contains no other foreign substance; that the various solids of the original fluid are preserved intact, even the butter globules being unbroken; that it is readily and perfectly soluble in water, and when it is so dissolved in proper proportion, it is in fact milk, as it was secreted by the cow, with the sole exception of the sugar which accompanies it; that the only medicinal or culinary operations in which ordinary milk is required, and this article cannot be used, are those in which sugar is inadmissible, while, on the other hand, whenever sugar is required in connection with milk, they are here found together.

In fact, the article under consideration presents some advantages over ordinary milk, even of the purest quality, arising from the variety of degrees of solution in which it may be employed. For example, in some diseases of the digestive organs, whether of infantile or adult life, where a more concentrated nutriment than ordinary milk may be required, it is at once attainable, as this article may be administered either in a solid or liquid form; it may be eaten like candy, or dissolved in almost any proportion, and in its ordinary use at the table or in the kitchen, we at least have the advantage of being able to dilute it for ourselves, instead of being obliged to rely upon the uncertainty of the extent to which this process is carried by those who supply us at our doors."

Prof. Davis has used this preparation in several cases, and concurs in their opinion of its importance. The principal objection alleged against it are: 1. It contains an extra quantity of sugar. 2. Its empyreumatic flavor. 3. Its price, being at the rate of five cents a pint for pure milk.

Report on Dysentery; by H. Taylor, M.D., and J. H. Beech, M.D.—This report is made up entirely of communications from private practitioners, principally of the State of Michigan. It contains, therefore, as the chairman justly remarks, "what would forever have remained latent, except for the action of the American Medical Association." Its facts are of local interest.

Report on the Effects of Alcoholic Liquors in Health and Disease; by R. D. Mussey, M.D.—This is a well-digested essay on the effects of alcoholic liquors, with conclusions inclining strongly to tee-totalism. Dr. Mussey has long been the advocate of temperance, both in foods and drinks. This paper embodies the reasons upon which he grounds his faith in regard to the deleterious effects of ardent spirits, and will repay perusal. We cannot, however, profitably notice it farther at this time.

Sketch of the Caustic Pulverizer; by R. H. Thomas, M.D.—This is an apparatus consisting of a mahogany box, two wheels and a "grindstone." The purpose of it is to reduce the caustic to an impalpable powder for inhalation by the patient. The inventor speaks favorably of this method of applying the nitrate of silver to the air passages.

Prize Essay—Statistics of Placenta Prævia. By James D. Trask, M.D., of New York.—In the deductions of this essay there is enough to satisfy the cravings of the most fastidious lover of statistical research. By the production of this paper, its author will extend still farther his reputation as a faithful statistician in obstetric medicine. But it is to the practical character of the deductions he has drawn from the mass of facts he has collated, in the preparation of this essay, that we must confine our notice. There are three tables, under which are arranged the principal facts of 353 cases. Table I. consists of cases subjected to the various ordinary modes of treatment, embracing recoveries and deaths, and a few that died undelivered. Table II. embraces cases of spontaneous expulsion of the placenta, prior to the birth of the child. Table III. includes cases in which the placenta was artificially detached before the birth of the child. In the analysis of the cases, our author has evidently sought to select from their histories every statement of fact bearing upon the condition of the patient, or upon the influence of medical treatment. But our space will not permit us to examine, in detail, these facts. The author deduces the following as the course which the experience of the profession has shown to be the most likely to be attended with success in the management of placenta prævia:

1.—"We have shown that, as a general rule, cases in which delivery takes place prematurely are attended with greater risk to the mother than those occurring at the full time, with the exception of those before the seventh month, which rarely prove fatal, in consequence of the undeveloped condition of the blood-vessels of the womb at that early period. The probabilities of the child being saved are probably better

at full term, though this is not so distinctly shown by our statistics. Hence, if it be possible, cases in which premature delivery is threatened ought to be conducted to the full period.

"This was the advice of Mr. Kinder Wood, a successful obstetrical teacher, who was in the habit of detaching the placenta in cases of dangerous hæmorrhage from its presentation. When hæmorrhage comes on before the completion of the term of pregnancy, absolute rest and cold, with, in some cases, opium, should be resorted to for the purpose of restraining hæmorrhage, *avoiding* the use of the *tampon* until the progress of the case indicates that extreme measures must be resorted to; for the introduction of the tampon, in the cases in which it is noted, was, in certain instances, soon followed by labor pains more or less effective. But, when its use is determined upon, a suppression of the hæmorrhage may be confidently relied upon for a time, at least, provided its introduction be skillfully effected. In many instances, however, at this early period, the hæmorrhage continues, and artificial delivery is the only resource.

2.—"Most cases of *partial* placental presentation require only rupture of the membranes. By this simple expedient, the uterus is brought into active contractions, and hæmorrhage restrained within, moderate limits, or entirely suppressed, until delivery takes place spontaneously, as occurs in a large proportion of cases, or is accomplished by art. But hæmorrhage, in cases of partial presentation, is not always thus controlled, and our first table furnishes not a few which were attended by most alarming loss of blood.*

3.—"In cases of complete presentation, if hæmorrhage does not yield to simple measures, and in dangerous cases of partial presentation, early delivery is of the first importance. To select the most favorable opportunity, for this is often one of the most critical tests of the physician's skill. To do this before the os has become dilatable is to incur the risk of inflicting serious lesions upon the uterine neck, and a difficult and protracted withdrawal of the child; while, to wait unnecessarily long, is to expose the patient to great hazard from unnecessary loss of blood. The rule should be to wait not for a dilated, but a dilatable condition of the os. The great source of danger in the conduct of cases of placenta prævia is the delay required to permit the necessary dilatation of the mouth of the womb; while waiting for this necessary prerequisite to delivery, exhausting hæmorrhage has often taken place, from the effects of which the patient has never recovered.

"With the hope of keeping the bleeding in check during this necessary delay, the membranes may be advantageously ruptured; for we need not, in these cases, fear any embarrassment to delivery from this cause, inasmuch as the uterus is almost invariably relaxed after severe hæmorrhage. The administration of ergot, under such circumstances, in the manner already described, with the view of keeping up a pressure upon the mouths of the bleeding vessels until the os should dilate, is sanctioned by the results in some of our cases in which it was

* Of the eight cases lost among Dr. Lever's cases, FOUR were complete, and FOUR partial presentations.

employed; and although not often given, as we judge, with this particular view, it promises to be, in many cases, a valuable resource.—In Dr. Fountain's two cases of complete presentation, rapid dilatation took place under its repeated administration; a compression of the placenta was kept up until the os permitted the introduction of the hand for turning, and both mothers and children were saved. In this way we imitate, to a certain extent, the course pursued by nature in spontaneous expulsion of the child.

"The inhalation of *ether*, in one instance, quickened labor, and chloroform, in another, seemed to favor relaxation of the uterus. How far these agents, especially the latter, may prove subservient to this important object, experience has not yet determined.

4.—"But whatever means may be resorted to for keeping in check the flow of blood while the os is undergoing dilatation, the physician should not leave his patient after that process has begun. Dangerous, and even fatal, flooding sometimes takes place even when the os is yet undilated, as happened in a case recorded by Smellie. Dr. Rigby laid down the rule, that the patient should not be left by her physician after the placenta was discovered to be presenting. This rule he afterwards modified, as the interval, in such cases, is too long to justify the sacrifice of time. But the physician should remain beside his patient until active hæmorrhage has ceased; and if dilatation is in progress, it is imprudent to leave the bedside until delivery has been effected. It has occurred in the experience of every physician to be surprised by the unexpectedly sudden dilatation of the os in some cases of ordinary labor. On reading several of our cases, it is very apparent that from a neglect of the precaution here urged, the physician failed to be at hand when sudden and fearful hæmorrhage took place, followed by perilous and even fatal exhaustion. Such sudden losses of blood are not uncommonly accompanied by a degree of dilatation of the os uteri that would render immediate delivery admissible, as in Case 69, from Rigby.

"It corresponds with the experience of those who have had the largest opportunities for observation, and is an inference certainly warranted by a general survey of our cases, that of patients who enjoy intelligent and active medical assistance from the commencement of hæmorrhage until the termination of labor, a very large proportion are conducted through their perils in safety, and no inconsiderable proportion of the children are saved. An early delivery by turning has been sanctioned by long experience, as the best general mode of treatment for securing safety to mother and child.

5.—"But in some instances, hæmorrhage will not yield to the means thus far recommended, and the os continues unprepared for artificial delivery. In these cases we may separate the placenta, with the confidence of almost certainly putting an end to the hæmorrhage, and with an almost equal certainty of destroying the child; unless the os should permit artificial delivery within a short time after the separation is effected. The urgency of the symptoms in such instances, is sometimes very great, and it must be left to the judgment of the practitioner, in each individual instance, to determine whether to separate the placenta or to wait still longer.

6.—"The os may be dilated or dilatable, and the patient in a state of extreme exhaustion. Here, turning could be performed with facility, but delivery would be hazardous. In these cases the placenta may be detached with much less disturbance to the mother than would occur in turning under such circumstances, and an opportunity afforded for the patient to rally before she should be delivered. Table III. affords several instances in which spontaneous delivery took place after such separation, and the patient recovered. Yet even in these cases, we must bear in mind that children are by no means necessarily destroyed by excessive loss of blood by the mother; and a resort to the stethoscope would doubtless often prove of great assistance, where in doubt as to the propriety of detaching the placenta. When we have satisfactory evidence that the child is dead, there can be no objection to an early resort to the separation of the placenta."

BIBLIOGRAPHICAL NOTICES.

ART. X.—*A Manual of Pathological Anatomy.* By CARL ROKITANSKY, M.D. Translated from the last German Edition, by WM. EDWARD SWAINE, M.D., EDWARD SIEVEKING, M.D., CHARLES HEWITT MOORE, and GEORGE A. DAY, M.D. Four volumes in two. Philadelphia: Blanchard & Lea, 1855.

THE appearance of this great work in an English dress is one of the fruits of the Sydenham Society, London. Had it accomplished nothing more in the way of making accessible to the English medical reader, valuable works, forever "sealed books" as far as the mass is concerned, it would have laid our profession under lasting obligations by this one act.

The name and fame of Rokitansky is familiar to every American reader. He is the authority to which they have been accustomed to refer every disputed pathological question. With advantages far surpassing any living pathologist, he has devoted his life thus far exclusively to the study of one department. Having no previous knowledge of the diseases of the subjects which he examines, his mind is entirely unbiassed, and his investigations are those of pure science.

The edition of Prof. Rokitansky's works before us is in two convenient volumes, and is equally as valuable as the costly London Edition for reading and consultation. Whoever, therefore, has any desire to learn the teachings of this great master, in relation to any pathological inquiry, or to study pathology simply as a science, cannot dispense with this work. As a correct pathology lies at the basis of correct therapeutics, we earnestly hope this cyclopædia of pathological knowledge, will find its way to every practitioner's library.

ART. XI.—*A Treatise on Medical Jurisprudence.* By FRANCIS WHARTON and MORETON STILLÉ, M.D. Philadelphia: Kay & Brother, 1855, pp. 815.

WE have in this volume the combined efforts of a legal and medical gentleman, to illustrate the subject of legal medicine. It would seem

that for the preparation of a complete and comprehensive work of this kind, legal and medical learning are indispensable. The great work of Paris and Fonblanque was the result of this association of the two professions. Chitty's work, the most frequently consulted by legal men of any single treatise, is to a considerable extent the joint production of that eminent legal writer and a medical man. Our own countryman, the late Dr. Beck, has, however, proved that a medical man, single handed, is competent for the task of writing a treatise on Medical Jurisprudence, complete in both its legal and medical aspects, and equally adapted to the wants of both professions.

The work before us is divided into six books, which severally treat of the following subjects:—Book I. *Mental Unsoundness.* II. *Questions Relative to the Fœtus and New-Born Child.* III. *Questions Arising out of Difference of Sex.* IV. *Questions Relative to Identity.* V. *Questions Relative to the Cause of Death.* VI. *Legal Relations of Homicide, Fœticide, and Infanticide.*

In the division of labor, it fell to Dr. Stillé to prepare the second, third, fourth, and fifth books; the first and sixth books, with several chapters having a more strictly legal learning, being left to his associate.

The first book on *Mental Unsoundness,* extending to 228 pages, is the most completely written section in the work. Insanity, in its various forms and in all its legal relations, is presented to the reader with fairness, candor, and copious illustration. This essay is so full, that it may be considered a complete treatise upon the medical jurisprudence of insanity, and has very properly been issued as such in a separate form.

The remainder of the work, for the most part the production of Dr. Stillé, gives evidence of great industry in the collection of material, and a sound, discriminating judgment in its arrangement, and in the deduction therefrom of rules and principles for the guidance of medical and legal men. The section on poisoning is especially full and complete.

This portion of the work has also an additional, but melancholy, interest to the medical profession, in being the last literary effort of the author. Mr. Wharton feelingly alludes to this fact in the preface, and pays a high but merited tribute to the memory of his lamented associate.

The work, as a whole, we unhesitatingly commend to the attention of the medical profession. It is better adapted to the American practitioner than Taylor's Manual, and though not so full as Beck's, has the advantage of that author's voluminous treatise in being later in publication and far more accessible.

ART. XII.—*Letters to a Young Physician just entering upon Practice.* By JAMES JACKSON, M.D., LL.D., Professor Emeritus of the Theory and Practice of Physic in Harvard University, etc., etc. Boston: Phillips, Sampson & Co., 1855. 12mo. pp. 344.

WE commend these letters to the attention particularly of the junior portion of the profession. There is much in them that, in a practical

point of view, will prove useful; while the ethical view that pervades them cannot but serve to make them better men and more honorable members of our profession.

ART. XIII.—*An Outline of Medical Chemistry for the Use of Students.* By B. HOWARD RAND, A.M., M.D., Professor of Chemistry in the Philadelphia College of Medicine, etc., etc. Philadelphia: Lindsay & Blakiston, 1855. 12mo. pp. 259.

THIS useful little volume is truly directive in character, and in it are inserted such facts as are of the most importance to the Medical Student. As an *outline* of Medical Chemistry, which outline should be filled up by the aid of text books or lectures, it cannot but prove highly useful to those for whose use it was designed.

ART. XIV.—*Physiological Chemistry.* By PROFESSOR C. G. LEHMANN, Translated from the Second Edition, by GEORGE E. DAY, M.D. Edited by R. E. RODGERS, M.D. With Illustrations, Selected from Funke's Atlas of Physiological Chemistry, and an Appendix of Plates. Complete in two volumes. Philadelphia: Blanchard & Lea, 1855, pp. 648 and 546.

THE republication of the works of Lehmann is due to the Cavendish Society of London. Like the Sydenham Society, this body was organized for the purpose of effecting the translation and publication of expensive foreign works, which no individual enterprise could safely undertake. That these Societies have respectively accomplished tasks which entitle them to the gratitude of every lover of the highest departments of medical science, our pages at this time bear abundant evidence.

Prof. Lehmann ranks deservedly among the best writers in the department of physiological chemistry, and his treatises are regarded in Germany as the highest authority. The present is the translation of the second edition of his great work, and is as nearly complete as a rapidly advancing science would admit at the period of its publication. The American edition is still more valuable than the English, in having appended to it, selections from the illustrations of the atlas of Dr. Otto Funke. The work thus perfected needs no commendation at our hands.

ART. XV.—*The Disease of the Rectum.* By RICHARD QUAIN, F.R.S. Second edition, with additions. New York: Samuel S. & William Wood, 261 Pearl-street. 1855. pp. 332.

WE take great pleasure in announcing the issue of a second edition of this excellent treatise, by the Messrs. Wood of this city. Although the first edition was published but a year since, a second is now called for, which the author has carefully prepared. It is now the best treatise on the diseases of the rectum and easily obtainable by the practitioner.

PART THIRD.

FOREIGN MEDICAL RETROSPECT.

PRACTICAL MEDICINE.

Apoplexy in Relation to Chronic Renal Disease.—The following extract is from an interesting paper, by W. Senhouse Kirkes, M.D., in the *Med. Times and Gazette:*—The intimate connection thus apparently subsisting between sanguineous apoplexy on the one hand, and diseased cerebral vessels, enlarged heart, and renal disorganization, on the other, as deduced from the foregoing analysis, will, perhaps, be best apprehended by viewing the result of this analysis in a kind of tabular form. The 22 cases of sanguineous apoplexy may then stand thus:—

Cerebral Vessels.	Heart.	Kidneys.	
Diseased	Diseased	Diseased	12 times.
"	"	Healthy	3 "
Healthy	"	Diseased	1 "
"	Healthy	"	1 "
"	"	Healthy	2 "
"	Diseased	"	1 "
Diseased	Healthy	"	2 "
			22

From this it appears that

The Cerebral Vessels were diseased	17	times
The Heart	" 17	"
The Kidneys	" 14	"

It cannot but be evident from this impartial analysis of 22 fatal cases of sanguineous apoplexy, in which the different organs were carefully examined, that disease of the kidneys, heart, and cerebral vessels stand in very close relation to the apoplexy; and this relation is the more evident when it is borne in mind that in more than half of the cases, the kidneys, heart, and cerebral vessels, were found coincidently affected, while in only two cases was there absence of decided disease of any of these parts.

Such being the principal information yielded by an analysis of these cases, two questions seem naturally to be suggested by it: first, what relation do the renal, cardiac, and arterial diseases bear to each other? Secondly, what share do they severally take in the production of apoplexy? As regards the relation subsisting between the renal, cardiac, and arterial disease in sanguineous apoplexy, I believe that the affection of the kidneys is the primary disease, and that the other lesions are developed secondarily, and in the order just indicated, viz.: hyper-

trophy of the heart, disease of the cerebral arteries, and extravasation of blood from rupture of these diseased vessels. That structural disease of the kidneys, of such nature as to interfere permanently, or for a long time, with their functions, has among its most frequent and prominent accompaniments, an hypertrophied condition of the left ventricle is, as already said, a fact now almost generally admitted by pathologists.—Of the various explanations of this pathological fact, the most probable, perhaps, is that which regards the blood as so far altered from its normal constitution by retained principles of urinary excretion, as to move with less facility through the systemic capillaries, and thus to require increased pressure, and consequently increased muscular growth of the left ventricle, to effect its transmission. To this, perhaps, may be added, among other additional causes, the direct influence on the circulation, resulting from the impeded transit of blood through two such large and vascular organs as the kidneys, in consequence of the structural change which has taken place in them. On whatever cause, or set of causes, it may depend, however, hypertrophy of the left ventricle of the heart, in consequence of prolonged renal disease, may, I think, be regarded as a well-established fact; and to the affection of the kidneys, therefore, may be referred the enlargement of the heart found in 9 of the 13 cases of associated cardiac and renal affections in the analysis above given, and part of the enlargement noticed in the 4 cases where the valves were considerably diseased.

External Employment of Oil of Turpentine in Consolidated Lungs from Pneumonia.—One of the most interesting features we have recently noticed in Dr. Todd's practice, at King's College Hospital, is a plan of treating solidified lungs and strumous pneumonia by turpentine—a mode not new, possibly, but eminently valuable, and one in which Dr. Todd seems to gain greater confidence every session. If we dwell on minor points of this character, it is because we see such cases too often overlooked, as they present themselves in the out-patients' department of hospitals, and because this medicine has been the secret of many reputed cures of consumption amongst practitioners, outside the profession.

J. B——, aged twenty-one, was admitted into King's College Hospital, October 2nd, suffering under various symptoms of chest disease, the result of a severe attack of pneumonia. Dr. Todd pointed out to his class that the entire lung of one side was completely solidified. This lung had, in all probability, gone through the three stages of pneumonia so familiar in practice, but often so very unmanageable in their results, the first and second stages of pneumonic inflammation usually merging into one another, and leaving the lung quite solid.

The first, or congestive stage, is easily cured, when detected early, as we recently took occasion to show in cases in the practice of Dr. Willshire and Dr. Parkes. The second stage, in which these congested vessels relieve themselves by fibrinous exudation into the lung, and slight hæmorrhage, as shown in the characteristic rust-coloured expectoration, is also very curable. It is not very well named, per-

haps, as hepatization, in which the lung is sprinkled sometimes with pinky granulations, and which Bayle and others look upon as the first stage of tubercular disease. Dr. Todd also described the exudation into the parts, with its granular blastema, blood-corpuscles, and exudation-cells, the latter, perhaps, traceable from the state of granular corpuscles to that consolidated stage where we now meet it, or the third stage of this disease—that of grey hepatization, with its various mottlings or spotting of the lung. A purulent fluid sometimes exudes, yet this is not essentially a state of suppuration, though very nearly allied to it; it is also different from tubercle, though in many cases next door to it,—the chief practical point, to Dr. Todd, being, that the consolidation of pneumonia does not necessarily destroy the vesicular structure of the lung, no more than effusion into the iris, in iritis, removable by mercury, destroys the structure of that delicate part; the inflammatory effusion, in pneumonia, occurring almost universally through the lung tissue, as well as *into* the air cells, and the intervesicular tissue. In a very advanced stage of pneumonia, it is true, we may have pulmonary abscess. This was evidently not the case in the present instance. The treatment adopted by Dr. Todd, and which he finds most effectual, was the following:—Wine, six ounces, daily; a draught every third hour, composed of julep of acetate of ammonia, with aromatic spirits of ammonia in excess; and strong turpentine stupes, carefully applied, every night and morning, over the back of the chest and site of the consolidated lung. Diet moderately stimulating.

October 4th.—On seeing this patient two days after, we found he had already begun to improve; the lung, previously quite dead, as far as respiratory murmur was concerned, began to give signs of healthy vesicular murmur. The right lung, as will have been observed, is most usually that affected. Dr. Todd has great faith in the stimulant action of turpentine—a remedy not often used, but which in this and numerous other cases has proved almost specific in its action. In phthisical cases, also, it may be used, combined with strong acetic acid, when its action becomes even still more beneficial.

25th.—This man is quite well.—*Lancet.*

Nocturnal Cerebral Disorder in Children. By C. H. Jones, M.B.—These cerebral disorders are, I believe, instances of the injurious action of the malarious influence which has been for some time widely diffused in London. Aguish affections, neuralgiæ, and rheumatic pains are exceedingly prevalent among the patients who visit St. Mary's, and they are not confined to them. In the cases above cited, I believe the brain or its membranes were the seat of the disorder. It is difficult to give it an accurate name, and perhaps better not to attempt, but to content one's self with indicating its affinities, which are clearly with rheumatism and neuralgia, or ague. Dr. Macculloch, in his able work on marsh fever and malaria, has clearly pointed out the possibility of cerebral disorder being the result of malarious miasma, and it seems highly probable that the central nervous organ might suffer in

the same way as the peripheral. I have lately had a delicate female under my care, who was married, and did not seem to be what is usually called hysterical, who suffered severely from attacks which appeared to be of this kind. She described them as consisting of a feeling of wretchedness, misery, and stupidness, as if she were quite lost, while at the same time such bad thoughts came into her mind, that she did not like to be alone. "She is obliged to get up and do something at these times, or she does not know what would happen." She finds taking a stimulant, or speaking to another person, relieves the bad feelings. Under arsenic, iron, and quinine, she improved a good deal; the attacks became much less frequent, but did not cease. The action of the malarious influence in this case was rather of a paralyzing kind, while in the cases above recorded it was more irritative. All my patients were weakly girls. In none of them was there any apparent organic disease. The attacks in all of the cases were nocturnal. In Nos. 1 and 3, iodide of potassium with iodide of iron was very efficacious, and was useful also in No. 2. This is a considerable evidence in favor of the rheumatic character of the affection. Quinine and citrate of iron and quinine were also decidedly beneficial, but I much incline to think that change of air, removal to some elevated healthy spot, would have been the best remedy of all. In Nos. 2 and 3, the abdominal organs were not in a healthy state, but it was evident that the disorder was not merely the result of irritation communicated from them to the brain. It is very certain that any lowering treatment would have been injurious. The flying pains in Case 1, and the swollen face in Case 3, help to indicate a rheumatic element in the disorder.—*Med. Times and Gaz.*

Diuretics in Renal Dropsy.—The question as to whether diuretics should be employed in the treatment of those cases of dropsy, which, from the condition of the urine, are known to depend upon diseased kidney, is one of great practical importance. Our readers may be glad to know the opinion of so excellent a physician as Dr. Burrows, respecting it. A few days ago, Dr. Burrows, at the bedside of a patient who was recovering from a very severe renal dropsy, made the following remarks:—"I wish, gentlemen, that you should notice the treatment which has been here pursued. I well recollect that long ago it used to be Dr. Latham's observation that this form of dropsy was often very efficiently treated by the tartrate of potash. That salt was, indeed, his favourite remedy. Then came the addition to our pathological knowledge, and the announcement of the fact that the disease was essentially one of renal disorganization. From this it was thought to follow clearly, that whatever stimulated or irritated the kidney must do harm. Diuretics, consequently, fell into almost universal disuse. Latterly, however, some of us are again coming back to the old practice; we find that no other remedies effect so much for the relief of the patient as diuretics, and we, therefore, prescribe the latter. The matter is one of experience, and my own is to the effect that the kidneys, though in a state of chronic disease, obey diuretics

well, and that no inconveniences are produced." The prescription which the patient, in this case, had been taking was as follows:—℞ Potassæ tartrat. ʒss., spirit. æther. nitr. ʒss., aquæ piment. ʒj. Ft. haust. ter die. The case was, of course, one of chronic dropsy, and the diagnosis as to its renal cause, had depended upon the absence of cardiac disease, and the presence of a large quantity of albumen in the urine.—*Med. Times & Gazette.*

Leucorrhœa as a Symptom of Phthisis.—Mr. Anderson relates (*Assoc. Jour.*) cases of leucorrhœa in persons having well-marked symptoms of phthisis, in which the leucorrhœa was cured by relieving the chest disease. The following remarks and case illustrate his views:

There are two classes of patients in whom I generally suspect, and in whom I very frequently find that phthisis exists; the first, where they have been married for several years but have never become pregnant, and have suffered also from some continued irregularity of menstruation, accompanied with a perpetual leucorrhœal discharge; the second, where they have suffered from similar symptoms under similar circumstances, with the exception of becoming pregnant, but never carrying a child the full period, frequent abortions taking place. The question then arises as to the propriety of stopping the discharge in such cases; as a general rule, it is decidedly wrong to do so; for, as we well know, there is always an outgoing from the system in phthisis, expectoration, sweating, or diarrhœa, and these often interchange, and take the place of one another; these drains, if not excessive, are beneficial, and serve the purpose of relieving the impeded circulation, and preventing the occurrence of congestion in the already impaired lungs. This remark holds equally good with regard to leucorrhœa; and no doubt this drain serves the same purpose as the others, and when moderate, should not be interfered with; but if it becomes evident that debility is increased by any drain upon the system, that drain must be cautiously checked or moderated according to circumstances.

Mrs. S., aged 28, December 28th, 1853. Has suffered from a severe leucorrhœal discharge since her last confinement, which occurred five weeks ago; the lochial discharge, at the usual time, lost its characteristic colour, and was succeeded by one perfectly clear, and profuse in quantity, which continued in the same state until three days ago, when it became sanious. There is great pain in the back and loins, with much bearing down and frequent sickness. She has had six children at the full period; and her recent labour is reported to have been bad, and attended with considerable hæmorrhage. She is troubled with cough and expectoration, which is brought up with difficulty. There is a vomica in the upper lobe of the left lung, and tubercular deposit in both sides. Tongue pale, lips bloodless, pulse weak and quick. No local treatment was employed in this case, as it evidently depended upon recent parturition taking place in a phthisical patient. Attention to the chest symptoms and general health stopped the discharge, and relieved her for the time being.

Pulmonary Phthisis cured by a Gonorrhœa.—Dr. Richard relates (*L' Abeille Med.*) the following case:—A man, æt. 28, farmer, of a lymphatico-sanguine temperament, was affected, at the age of 25, with a gonorrhœa, which was promptly cured by injections. Soon after, his health began to fail with pulmonary symptoms, as cough, and puriform expectoration, pain in the right side, chills followed by fever and night sweats, hemoptysis, and cavernous râle. While these symptoms were progressively increasing in severity, he contracted a gonorrhœa. Dr. R., reflecting upon the occurrence of severe symptoms soon after his former cure, employed only mild remedies against his new disease. The result was very favorable, for the pulmonary symptoms soon began to decline, and in two months disappeared. The gonorrhœa was then cautiously treated, and eight months after the cessation of the discharge there was no return of the chest symptoms.

Treatment of Eczema.—Mr. C. H. Jones reports several cases of Eczema, with the following remarks on the treatment:—

I have notes of about forty cases, for the most part out patients, at St. Mary's Hospital. Some of them might, perhaps, have been more properly classed as impetigo; but I do not love straining after subdivisions, and I group them together, because they all had the same general easily recognized features; viz.:—the pouring out of an exudation, which was serous or sero-purulent, from a more or less inflamed and excoriated or superficially ulcerated surface. Out of forty cases, fifteen were below the age of five years, and twenty-three below that of ten. The cases occurring in children have generally appeared to me by far the easiest to manage; as indeed is the case with most of the diseases of the young frame, yet sound and "integer vitæ." The treatment which I now adopt invariably in such instances (it being understood that active inflammation is not present), is to give a minim of liquor potassæ arsenitis three times a day to a child one year old, desiring all scabs to be removed carefully, and dilute citrine ointment (℥iss to ℥iss) to be rubbed into the affected parts once a day. I have often given a few drops of liquor potassæ conjoined or not with a grain of iodide of potassium, with the above dose of Fowler's solution; but it has not appeared to me to be of any particular advantage; and I now mostly use the arsenic alone. Instead of the citrine ointment, I have used in several cases zinc ointment with nitric-oxide of mercury (℈j to ℥j), or unguentum hydrarygyri ammonio chloridi diluted, or bichloride of mercury lotion (gr. v-x to ℥ij). I am not very sure, however, that one has any particular advantage over the other, except that the zinc and nitric-oxyde combination, especially if about a drachm of subcarbonate of lead be added to it, seems to be best suited to irritable excoriated surfaces pouring out much discharge. With this treatment, I have every reason to be quite satisfied; the only thing that I feel some hesitation about, is, whether some amount of relapse may not take place when the remedies are discontinued. However, as I do not find that any discharged cases return again upon my hands, except in rare instances, I think relapse cannot be very frequent.

In one case, I tried the effect of dilute citrine ointment alone, and it unquestionably did good; but the eruption was not satisfactorily cured without the administration of arsenic. In this class of cases, I have not attempted any particular restriction as to diet, and have not found it necessary. With regard to the action of the arsenic, I believe it operates as a tonic to the nerves of the affected part, induces constriction of the vessels, and, therewith diminishes the abnormal hyperæmia, and arrests the discharge. This view of the *modus operandi* of arsenic in curing skin diseases was first put forth by me in a paper published in the *Lancet* for July 21st and 28th, on paralytic conditions of the sympathetic. I there pointed out that the same tonics that cure neuralgiæ, cure agues, in which vascular congestion is the prominent feature; and I stated that it seemed to me reasonable to consider that in the one case the remedial action was exerted on the cerebro-spinal, in the other on the sympathetic, nerves. If we know that a drug has a determinate action in one instance, affecting one particular tissue, is it not exceedingly probable that in other instances, where its action though certain is more obscure, it also acts in a like manner? Thus we have three facts perfectly well ascertained, and which might be regarded as having no mutual relation; viz.:—1, that arsenic cures neuralgia; 2, cures ague; and 3, cures skin-diseases. Now, if we did not know that palsy of the sympathetic causes congestion of the vessels to which it is distributed, and in states of debility even inflammation, we could not see how there should be any affinity between neuralgia, ague, and skin-disease. But the experiments of Reid, Bernard, and others, have shed such a light on the relation of the nerves to the blood-vessels in many pathological processes, as can only be appreciated by the observant and philosophic medical practitioner."—*Association Med. Journal.*

Skin Diseases.—The following notes from Prof. Hebra's Annual Report of Diseases of the Skin, treated at the Vienna Hospital, is from the *Assoc. Med. Jour.:*

I.—*Acne.*—17 cases (13 males, 4 females). Vapour bath and washing with soap and alcohol, sufficed to cure all these cases. There were 4 cases of the allied affection *sycosis*, all of which were successfully treated by inunction with iodide of sulphur ointment, and the application of strong nitrate acid as a caustic.

II.—*Ecthyma.*—13 cases (11 males, 2 females), generally associated with scabies or pediculi, and induced by the scratching. Warm fomentations sufficed for the cure.

III.—*Eczema.*—150 cases (96 males, 54 females). Hebra includes under this term the various forms of impetigo, tinea, and porrigo; there being, as he believes, no difference between them and eczema impetiginosum; for, on destroying the efflorescences, or removing the crusts and scabs, we then perceive the characteristic phenomena of eczema—red, moist places, with more or less infiltration of the cuticle. With regard to the cause of the disorder, it was traced with certainty to an elevated temperature (either exposure to the sun or working at

the oven) in 22 cases; to irritation of the skin by ointments, plasters, etc., in 21 cases; to the repeated action of water in washing clothes, to fomentations, etc., in 9 cases; to scratching the skin, in consequence of the irritation caused by pediculi, in 20 cases; to varicosity of the veins in 19 cases; and in eight cases it was associated with anomalies of menstruation.

The modes of treatment were very various, but in each patient the system commenced with was adhered to.

1.—In 46 cases, cold water alone was used, in the form of fomentations, baths, douches, etc.

2.—In six cases, a wash of sulphate of zinc (3j to the pint of water) was used.

3.—One case was treated with corrosive sublimate baths.

4.—In 2 cases, the parts were kept moist with a dilute solution of potash (3j to the pint of water).

5.—In 3 cases, the caustic action of a concentrated solution of potash (3j 3ij of water) was tried.

6.—In 70 cases, soft soap was used. It was usually applied night and morning, for three consecutive days, to the diseased places, which were then covered with flannel, and left untouched for four consecutive days. This process was repeated till the moisture and itching disappeared, and there was merely a red, dry, squamous surface remaining, (pityriasis rubra,) which was treated with tar.

7.—In 19 cases, tar was used; the best being that obtained from the wood of the beech or of the juniperus oxycedrus (the product in this case being the oil of cade). The action of both these agents is nearly the same, but the latter is the least disfiguring, and, therefore, most applicable for diseases of the face. We have already indicated the proper period for commencing this form of treatment. The affected parts are smeared over once or twice a day, till an unbroken blackish brown investment is formed, which usually happens after about half a dozen applications. During this time, the parts must not be touched with water. The longer the tarry covering remains, the more certain is the result of its action. If it soon falls off, this is a sign that moisture is still exuding, and we must return to the preceding treatment (merely with soft soap).

8.—In 3 cases, the expectant method was trusted to.

Whatever was the external treatment, internal remedies were at the same time used, to improve the general health; as, for instance, cod-liver oil in the scrofulous cases, aloes and iron in the chlorotic cases, etc.

IV.—*Elephantiasis Arabum.*—6 cases (4 males and 2 females). In 5 cases, the leg was affected; and in one, the penis and scrotum. One patient recovered in consequence of prolonged pressure by bandaging; and in 4 others, an improvement was manifested. One woman died from phlebitis, but compression had not been used.

V.—*Favus.*—13 cases (7 males, 6 females). In all these cases the scalp was the seat of the disorder; and in this position the disease is especially persistent, from the fact that the peculiar microscopic fungi of favus occur within the hairs, which thus form a reservoir of

spores, from which a new development of favus masses springs up when the older masses have either fallen off or been removed. [When favus occurs in any other part, it always runs an acute course, and disappears spontaneously in a few weeks.] The treatment consisted in keeping the affected spots as clear as possible, and extracting the diseased hair with the fingers.

VI.—*Herpes.*—28 cases, (21 males, 7 females). One was a case of herpes circinatus, 2 of herpes iris, and the remaining 25 of herpes zoster. The treatment in all the cases was expectant.

VII.—*Herpes Tonsurans* (occurring in 5 men), and *Pityriasis Versicolor* (in 13 men) were always cured in the course of a week or two by active inunction with soft soap, and then covering the part with flannel. The soap should be rubbed in for the space of ten minutes daily for from four to six days, and a layer of about a line thick left, before flannel is laid.

SURGERY.

Irritable Bladder.—The following cases may be conveniently grouped together, as affording hints in practice where there is excessive pain with irritability of the genito-urinary organs without the cause being very obvious.

1.—The first is a case of a man, aged fifty-six, (W. H——,) on whom we saw Mr. Ferguson operate, about the middle of July, for distressing and continued irritability of the bladder, in whom, in a word, there had been present, for a long time, some of the worst symptoms of stone in that viscus, without stone being present. All the ordinary remedies had been previously tried in vain, when Mr. Ferguson, as a last resource, suggested and had recourse to the operation of cystotomy —an operation not at all like lithotomy, as he stated at the time, but more in the manner of Syme's or Allarton's operation in the mesian line of the perinæum, the intention being to cut across the nervous plexuses and irritable parts at the neck of the bladder. August 18th:—About a month after we saw this patient again; he expressed himself wonderfully relieved as regarded the torture he had previously suffered; the wound was then still open in the middle line of the perinæum, though the urine passed through the natural passage. Oct. 5th:—we find the man is quite well. The patient was a very bad subject for any operation, his entire system having suffered from the effects of long-continued pain of a neuralgic character.

2.—A poor woman in St. George's, under the care of Mr. Pollock, with an almost perpetual call to pass urine, had yet no disease of the bladder. A small vascular tumor was found at the opening of the urethra. Mr. Pollock applied the strong nitric acid to it. These tumors easily bleed; they are exquisitely sensitive, causing great pain on micturition, with irritation sometimes extending to the mucous membrane of the bladder itself. Excision, in such cases, is followed usually by a new growth, if the strong nitric acid, or, what is better, the actual cautery, be not subsequently applied. The case has done very well.

3, 4.—Of these two cases, one was under the care of Mr. Adams at the London Hospital; the second, under Mr. Paget at St. Bartholomew's. In both instances there was intense irritability of the bladder. Both patients were young. All the usual signs of stone were present without stone. A great difficulty exists in such cases as these in discovering the cause of the irritation; hæmorrhoids, calculus, fistula in the rectum, will usually be suspected or perhaps discovered; but in both these cases the surgeons felt quite at sea on the subject, as no cause for the disease could be found. Uva ursi, alkalis, opiates, etc., afforded temporary relief.

5.—E. F——, aged twenty-eight, single, was admitted into Boynton ward, St. Mary's Hospital, under Mr. I. B. Brown. She states that about twelve months previously she began to have pains in the bladder and bearing down in the rectum and vagina, pain during and after defecation and leucorrhœa. She had suffered much in her general health from the intense pain and profuse discharge of the last few months; was emaciated, dyspeptic, and firmly impressed with the idea that she was laboring under extensive cancerous disease of the womb; there was much lumbar pain, sympathetic pain in the thighs, and very great irritability of the bladder, as well as some derangement of the menstrual functions. On examination per vaginam, no evidence could be obtained of uterine disease, and attention was therefore directed to the rectum. Upon introducing the finger into this viscus, a fissure of the mucous membrane was detected just within the orifice, and a streak of blood on the finger after withdrawal marked its length. This case (oftener met in practice than suspected) told at once its own history. Mr. Baker Brown divided the mucous membrane through the ulcerated surface with Copeland's knife, cutting, at the same time, a few fibres of the sphincter ani. One grain of solid opium was ordered to be taken every six hours, and the patient was placed on simple diet. At the last report we find that great improvement has taken place in the patient's condition; pain, both local and sympathetic, has disappeared; the leucorrhœa is gone; she has had evacuations of the bowels without suffering, and her cheerful countenance is in strong contrast to her former dejected aspect. Ordered five grains of ammonia-citrate of iron, and a quarter of a grain of quinine, in water, three times a day. She was discharged perfectly well."—*Lancet.*

Cystic Sarcoma of the Testis.—From a paper on this disease in the *Med. Times and Gaz.*, we learn that it is very rare. But five cases have occurred in the London hospitals in three years; Cooper mentions but five; Curling, none. Two views are held in regard to its nature. 1. Sir Astley Cooper believed that the cysts were dilated gland tubes; and he is supported by Quekett and Curling. The objection to this explanation is, that the gland lies external to the growth, and is separated from it by a fibrous capsule. Mr. Curling, however, believes that the diseaes begins in the tubes of the reto testis, thus obviating the objection. 2. Mr Paget gives his opinion of their nature as follows:—"The specimens that I have seen of it

make me think that it is essentially a fibrous, or fibrous and cartilaginous tumor, in the testicle, with more or less cyst formation in the tumor."

The following is a summary of sixteen cases reported in this paper: *Age*—extremes, 18 and 58. *Duration*—average, 21 months; extremes, 3 months and 11 years. *Health*—good, 6; impaired, 3; not mentioned, 7. *Cause*—blows, 5; not known, 4; not mentioned, 7. *Result*, all recovered from operation. *Condition of tumor*—cysts in all; enchondroma in 3; cancer in 1; cholesteatoma in 1. *Gland structure of testis*—expanded over tumor in 8; lost in the tumor in 4; not described, 4. *Epididymis*—healthy, 6; involved in disease, 3; not noticed, 6. *Remarks*—in three cases the cysts had developed intracystic growths.

Punctured Wound of Pericardium—Recovery.—A case occurred to Mr. Erichsen, in which a man, stabbed with a knife in the fourth intercostal space, over the heart, presented the symptoms of wound of this organ, viz.:—face pale and anxious, pulse 112, respirations 28 and painful, etc. He was actively treated by local depletion, calomel, and rest, with success.

Nævus.—Mr. Birkett has removed a very large, square-shaped nævus from the walls of the abdomen and side of the chest of a middle-aged man. The tumor was thick, broad, and hard, studded with wart-like eminences, and exhaling a sanguineous serum, which was rapidly reducing the patient. The dissection required great care, but was successfully accomplished, and the patient recovered.

Aneurism—New Method of Treatment.—Mr. Ferguson has treated several cases of subclavian aneurism by a novel method. It is by pressure of the thumbs to break up the fibrinous layers in the cavity of the aneurism, which, floating down into the brachial artery, block up its calibre, and thus cause a partial stoppage of the current through the aneurism. This effects a cure on the principle of Brasdor's operation, on the distal side of the aneurism. In one case, two years had elapsed after this treatment was resorted to, and the cure appeared complete.

Popliteal Cured by Compression.—Mr. Adams, of London Hospital, treated a case successfully by compression, which originated from the kick of a horse. The part was dusted with flour, and a 4lb. weight applied; this was changed to a 7lb. weight on the 2nd day: on the 6th day the clamp tourniquet was applied to the lower part of Scarpa's triangle, which succeeded; in less than a month the cure was effected.

THERAPEUTICS.

Nux vomica as an Aperient.—Among the conditions over which nux vomica, and its active principle, strychnia, possess most useful powers, is that of habitual constipation, from muscular atony of the intestinal tube. At the City Hospital for Diseases of the Chest, we observe that Dr. Peacock and Dr. Andrew Clark are both in the habit of frequently resorting to it for this purpose. It is generally given in

combination with the compound rhubarb pill, and in doses of the extract of from a sixth to half a grain. Of itself it can, perhaps, scarcely be deemed an aperient,—that is, it does not so much excite peristaltic action, as supply tone to the weakened muscular coat, by which it is enabled to respond efficiently to other irritants. Hence the need for combination with rhubarb, aloes, or some similar drug. Dr. Peacock mentioned to us a case under his care in St. Thomas's Hospital, in which a man of feeble intellect, and torpid nervous system generally, had derived great benefit from its employment. At first, the bowels were obstinately costive, and lavements produced no action; but since the use of the nux vomica (twice daily, gr. ss.) they have so far increased in power and susceptibility, that simple injections are quite sufficient, and procure all the action that is necessary.—*Med. Times and Gaz.*

Acid Beef-Tea.—The following is the formula for an acid beef-tea, which Mr. Paget has recently introduced into use in St. Bartholomew's Hospital. It was originally suggested by Leibig, and is intended, in cases of great debility, to supply the stomach with fluid nutriment, which, containing its own acid, will task the digestive powers in the least possible degree.

Take of beef, veal, or chicken, chopped fine, half-a-pound,
" of hydrochloric acid (strong), four drops,
" of water (cold), eighteen ounces,
" of common salt, a pinch.

After macerating for an hour, strain off the fluid, using no pressure. The remaining meat may be treated with half-a-pint of water, and a second solution obtained. If the fluid be not clear a second straining will be needed. The solution does not taste acid, and is very palatable. Pepper, or other spice may be added, according to the patient's taste.—*Ibid.*

Chlorate of Potash in Ptyalism.—In two cases of severe salivation from mercury, recently under his care at the Metropolitan Free Hospital, Mr. Hutchison has employed the chlorate of potash, administered internally. In each a rapid cure was effected. The first case was that of a prostitute, aged 19, who, suffering from primary syphilis, had been ordered five grains of blue pill, and a quarter of a grain of opium, twice a-day. After taking nine of these pills, profuse and most threatening ptyalism set in. The lips, cheeks, and gums, became much swollen, the breath was fætid, and there were large ulcerated surfaces on the inside of both cheeks. She could not eat, and the pain kept her awake at night. The original sore had nearly healed. Fifteen grains of chlorate of potash, thrice daily, in an ounce of water, were ordered, no other treatment whatever being adopted. On the next day there was marked improvement; on the third day all fætor had disappeared, and the ulcers were nearly healed; at the end of a week she could eat crusts, and the mouth was, in every respect, perfectly well. In the second case the disease was in a milder form, but the benefit was not less marked.—*Ibid.*

Tormentilla as an Astringent.—The decoction of tormentilla, a remedy in not very general use, is, we observe, a great favorite with Mr. Hilton, of Guy's Hospital. It is employed in cases of piles, passive hæmorrhages, diarrhœa, etc., as a tonic and astringent. A few weeks ago, Mr. Hilton ordered it (in doses of an ounce and a half every three hours) to a patient in whom hæmorrhage from the bowel had occurred four days after an operation for hernia, and took the opportunity of observing to his class that it was one of the most efficient vegetable astringents that he knew.—*Ibid.*

Nitric Acid and Sulphur as an Escharotic.—Mr. Cock has recently been employing, in some cases under his care, in Guy's Hospital, as an escharotic, a compound of nitric acid and sulphur. A paste is made by mixing the strongest nitric acid with sublimated sulphur, until of a proper consistence. This paste is applied to the diseased surface, the surrounding parts having been protected by plaster, as when chloride of zinc is used. The mixture does not run about. It appears to give less pain than the nitric acid alone, and acts longer, producing more of an eschar. In one case Mr. Cock employed it to remove a prominent mass of granulations in fungous testis, and it succeeded well. A cure, however, did not result, as a subsequent attack of inflammation aggravated the condition. We understood Mr. Cock that the formula had been suggested to him by Sir Benjamin C. Brodie.—*Ibid.*

External Use of Cod-Liver Oil in Skin Diseases.—The reader may find in the *Medical Times and Gazette* for January 3, 1853, page 23, a short notice of the employment of cod-liver oil in certain forms of skin disease, more especially in eczema. The remedy was then new in this country, and the trials on which our observations were founded, had been made in St. Bartholomew's Hospital, by Mr. Paget, to whom it had been recommended by Professor Malmsten, of Stockholm. Since then the oil has, we believe, been extensively used in England, and with much the same favorable results which Mr. Paget obtained from it. We refer to the matter again, in order to allude to a paper, recently published by Professor Malmsten, himself, in a Berlin Medical Journal on the various uses of the fish oils, and more especially on their external employment against intractable skin diseases. The practice of the Swedish physician appears to have been most successful; and amongst the cases narrated as having been cured, are examples of chronic and impetignoid eczema, impetigo, psoriasis, chronic pityriasis, and prurigo formicans. The plan adopted differs somewhat from what we have seen followed in this country. Instead of using the oil merely as an ordinary liniment, the affected parts are directed to be kept constantly soaked with it. If the whole skin be affected, the patient is made to lie in bed; all his body and bed linen being saturated with the oil. This system is continued until the skin is restored to health, the patient being allowed an alkaline bath once a week, but no other washing or change of clothes being permitted.—*Ibid.*

PART FOURTH.

AMERICAN MEDICAL RETROSPECT.

Abortion following the Administration of Chloroform. By L. G. Robinson, M.D., of Detroit, Mich.—Some of the zealous advocates for the anæsthetic effects of chloroform, in the practice of midwifery, claim for that agent, efficiency of specific action upon the contractile fibre of the uterus. And in the diversity of experience and observation, which is found among writers respecting its utility, it has obtained a "duplicity of character," or specific energy, which, if founded in truth, must have a *rationale* in some law of physiology. Whatever may be gathered from practical observation, contributing to the exposition of that governing law or principle, will be of interest to the profession, just in proportion to the amount of evidence fairly deduced from facts. Therefore, I offer the following case, the detail of which may have some weight worthy of record:

A few days since, I was summoned to the bedside of Mrs. N——, an English lady, aged about 35, whose history is briefly as follows:—About four years since she came to this country, and soon after her arrival, became a resident of this city. She had been married six years, was the mother of two children, and had uniformly enjoyed excellent health. In appearance, she possesses a robust, vigorous constitution, of phlethoric habit, and florid complexion—true to the English model. Nearly two months after her arrival in this city, she aborted in the 3rd month of pregnancy, the cause of which was attributed to a fall, and mechanical injury. She recovered promptly, however, and about two years since gave birth to a fine boy, at the end of a full period of gestation. Her labor was natural and easy, and her convalescence was not protracted. Since that time she has enjoyed uninterrupted good health up to the event of her present miscarriage.

On the morning of the day in which this occurred, she engaged in the duties of her household affairs, as well as usual, with the single exception of a slight toothache. Her sister, living in the adjoining house, had, for some time past, been in the habit of using chloroform by inhalation, quite freely, to relieve a facial neuralgia; and happening into the house of Mrs. N——, found her suffering, as she believed, from a similar cause, whereupon she immediately procured her bottle, and dropping a quantity upon her handkerchief, urged her to "snuff freely until she would begin to feel happy." Leaning back in her rocking chair, she gratified her sister by full inspirations until the toothache was forgotten, and even sensibility to *severe pinches*, so much obtunded as to afford great merriment for the sympathising and provident sister. She remained in this condition nearly a half hour,

and it was even then most difficult to arouse her to a semiconscious state, in which she expressed a desire to lie down on her bed. When asked if she was comfortable, and free from pain, she answered in the affirmative. In this happy dream she rested till about four o'clock, P.M., when full consciousness returned, and on attempting to rise from her bed, vomited freely, and then was seized with pains of labor, more severe, tenfold, than she had ever suffered before. This had continued a little more than an hour when I arrived. She at once informed me that she was in labor, (a fact clearly inferred from her expulsive efforts and intense suffering,) and, as she expressed it, "much before time," being in the fifth month of gestation.

Upon examination, I found uterine effort extremely severe, and continuous, while the fœtus was just passing from a well-relaxed os uteri, and was removed without delay, exhibiting no signs of viability. The after-pains continued severely intense, in spite of anodynes, for about six hours, accompanied with considerable hæmorrhage and febrile excitement. But towards morning, of the following day, she awoke from a refreshing sleep of two hours' length, quite free from pain; and from that time has continued to convalesce without any untoward symptoms worthy of note.

Taking Dr. Snow (quoted by Ransbotham) for authority, we have *five stages* or "*degrees*" in the pathological effects produced by Chloroform, as follows:—

Firstly, there exists a kind of inebriation, which is usually agreeable when induced for curiosity. In the second degree, the mental functions are impaired, but not entirely suspended; consciousness, however, no longer continues correct, and a sort of dreamy state supervenes. "This degree may be considered analogous to delirium, and to certain states of the patient in hysteria and concussion of the brain; and it corresponds with that condition of an inebriated person, who is *not dead drunk*, but in the state described by the law as *drunk and not incapable.*" It is very transitory, and if the inhalation be suspended, the patient, in a very few minutes, recovers the perfect possession of the mind. A considerable degree of anæsthesia is induced in this stage, and sometimes a high amount of mental excitement, that renders the patient difficult to manage, shows itself. In the third degree, all voluntary motion is paralysed. The fourth degree brings with it relaxation of the *voluntary* muscles, together with complete insensibility to external impressions, so that no pain is felt, even on the infliction of severe personal injuries. Yet, although reflex movements cannot be excited by touching even the most sensitive parts of the frame, still some functions of the spinal cord remain, as the sphincters continue contracted, and according to most of its advocates, *the action of the uterus in labor is not materially interfered with.* The fifth degree of narcotism is *the commencement of dying.*"

From these, Ramsbotham gives us the following synopsis of physiological phenomena exhibited in these effects:—

At *first* the *sensor* and *motor ganglia* are brought under its influence. The function of the cerebrum is next arrested, and *coma* supervenes, "a total abolition of consciousness, reducing life to a series of

automatic movements." Then the *medulla oblongata* and the *spinal centres* become involved; and lastly, the *ganglionic system*, when the action of the heart is arrested, and life can no longer be supported.

This account of the various symptoms presented, and the order of their arrangement, may be correct as a "*general rule*," but a margin must be left for the exceptions growing out of the great diversity of constitutions, rendered peculiar by age, sex, temperament, diseased condition, etc., and, therefore, furnishing a corresponding variety in the degree of susceptibility to the influence of that agent. But let us apply our knowledge of its effects, so far as it goes, in the case before us. We find that the description (given by the sister of Mrs. N——,) of the effect, corresponds accurately with that of Dr. Snow's *second degree*, including, also, the abolition of sensibility described in his *fourth* degree. There can be no doubt that the patient was thoroughly under its influence, for she affirms that she has no recollection of getting from her chair to the bed, a distance of about ten feet. She can only recall the circumstances of inhaling the vapor.

The *rationale* proposed, with regard to the physiological action of chloroform, applied to this case, would be, that the first effect was *stimulant*, exciting the *sensor* and *motor ganglia*. Secondly, the function of the cerebrum was arrested, and partial *coma* supervened. Thirdly, the *medulla oblongata* and the *spinal centres* became involved, producing a *sedative* effect, relaxing the voluntary muscles, and, also, the os uteri. The stimulant effect first passed off, leaving the patient relaxed, or under the *sedative* influence. And her return to consciousness brought with it *re-action*, which ended when labor was completed. Now, *caution*, with regard to our conclusions, suggests the following enquiry, viz.:—Would as profound inebriation from the effects of spirituous liquors, in *the same constitution*, have produced like effects?—Would their sedative effect relax the voluntary muscles, and the os uteri, in a constitution that had once aborted? If so, then we can with reason suppose that re-action might be sufficient to introduce labor by exciting contractions of the uterus.

Where, then, in the history of this case, can Dr. Simpson, or any other advocate for the use of the anæsthetic effects of Chloroform in labor, point to its "*specific energy*" expended upon the contractile fibre of the uterus?

May we not as reasonably explain the phenomena produced without ascribing to it this peculiar property?

If we should jump at conclusions in our research for the *cause*, we should probably find many who would endorse the unqualified assumption that the *direct exciting cause* was chloroform. But such "circumstantial evidence," though apparently conclusive, ought not to be regarded as sufficient basis for even an assumed verity, respecting the physiological effect of that vapor.

Let us be content, therefore, for the present, with the simple record of the facts, and give them no more weight of evidence than that to which they are justly entitled, ever remembering that we are dealing with *the truths of Medical Science.—Peninsular Jour. Med.*

Singular case of Vicarious Menstruation.—By J. Boring, M.D., Prof. of Obstetrics, etc., in the Atlanta Medical College, Ga.—The case alluded to, is that of a negro woman, belonging to Mrs.——, about thirty-five years of age, of apparently good constitution, and, with the exception about to be mentioned, general good health.

She began menstruating at the age of fifteen, and continued regular in this respect until about three years since. Eight years ago, when about twenty-seven years of age, she was attacked with violent pain in the foot, which was succeeded by an abscess, which was lanced, but did not heal. Ulceration succeeded, which continued to move upwards until the leg was involved and became the seat of its permanent location. About three years since, the catemenial discharge began manifestly to decline, and so continued until it ceased altogether, when she was seized with severe shooting pains, passing from the sacro lumbar, to the uterine region, and to the ovaries. At the approach of her next menstrual period, she noticed a slow oozing of blood from the ulcer on the leg, (I give her own account of the matter,) which continued about the usual time of that discharge and ceased. At subsequent *periods*, the same discharge sometimes occurred, while at others, instead, small sacks of blood were formed contiguous to the ulcer, which were obliged to be opened and the blood discharged, before relief could be obtained.

In June last, the ulceration of the leg had become so extensive and threatening, as to require, in the judgment of Dr. ——, (whose patient she then was,) amputation.

Since the operation, the ulcer being removed, there has been no regular monthly periodic discharge of blood, but, at each monthly period, sacks, such as were above described, form around the stump of the amputated limb, and require to be lanced for the relief of the patient. I have seen these sacks, and in fact opened them, and can entertain no doubt as to their true nature. So uniform are these singular occurrences in their periodic character, as to have induced this woman to keep a lancet for the purpose, and thus *surgically* to perform the work of menstruation. It should be observed that she continues without any vaginal discharge, and that the determination of blood to the stump of the amputated limb, together with the formation of these sacks of blood, occur periodically, and observe *strictly* the menstrual periods, as to the time of their recurrence and duration.—*Atlanta Med. and Surgical Jour.*

Case of Abscess of the Left Ovary in the Non-Puerperal State. By F. M. McCabe, M.D., of Louisville, Ky.—Bridget Griffin, aged thirty-three, a native of Ireland, was admitted to Louisville Marine Hospital, Aug. 2, 1855, for supposed prolapsus uteri, of which affection her physician had assured her she was the subject. Her menstrual functions had been uniformly healthy up to the present attack. Within twelve months had had intermittent fever irregularly, from which, however, she had been entirely free for two months prior to entry. She was attacked, on July 22nd, by chilly sensations, severe lumbar and

hypogastric pains, a sensation of weight deeply seated in the pelvis upon attempting to walk, with much vesical irritation, as a consequence of protracted exposure to toil while washing clothes, being then on the eve of menstruation, which, indeed, ensued on the following day, but stopped abruptly after lasting less than twenty-four hours, (her menstrual period usually occupying three days and nights.) On the morning of the 23rd she had a severe chill, followed by high febrile re-action, chills continued to recur at about the same hour for six successive days, but growing with each paroxysm progressively lighter, until after the sixth return, when they spontaneously ceased. At this time, the lumbar and hypogastric pains were much lessened in intensity. On the tenth day from the attack, the notice of the nurse was suddenly called to a profuse purulent discharge from the vagina, which amounted, perhaps, to a quart. The patient was immediately placed upon a vessel, and states that there was a further discharge of about a pint of bloody pus. A continuous, but small, discharge existed up to the time of her entry into the Hospital.

Condition at the time of Admission.—August 3rd.—No purulent discharge from vagina. On examination, with the speculum, a small perforation of the left vaginal wall is seen; uterus *in situ*, and of healthy aspect. The finger, introduced into the vagina, encounters an indurated swelling encroaching upon the cul de sac of this canal; an indurated swelling surrounding the aperture. Patient complains of no pain. Pressure over the abdomen is accompanied by tenderness, which is most marked over the left iliac region, where she expressed herself as having suffered most from pain in the beginning of her attack. The indications for medication not being very urgent, I contented myself by directing fomentations to be applied to the abdomen.

August 5th.—Patient has a chill; and, on inquiry, found that she had one yesterday. August 6th.—Ordered quinia grs. ij. every two hours till grs. xxv. were taken, with but the effect of retarding the paroxysm several hours. August 7th.—Quinia given to cinchonism. August 8th.—Cinchonism; continued to escape chill till 13th, when it became necessary to resume the quinine, to which was now added Fowler's solution. The general evidences of anemia being present, the patient was also directed to use some of the ferruginous preparations. August 14th.—Specular examination shows the point of ulceration to be granulating healthily. August 20th.—Menstruous flow reëstablished, perfectly normal in character. August 25th.—Patient left the Hospital cured.—*Western Jour. Med. and Surg.*

Cases of Rupture of the Appendix Vermiformis. By F. M. Robertson, M.D., Charleston, S. C.—The subject of the case was a boy aged twenty-one years, the offspring of mulatto parents, who had enjoyed uninterrupted health from childhood. He complained on the 29th of August of a slight pain over the umbilical region, which he described as a griping sensation, such as frequently arises from wind in the intestines. A simple anodyne relieved him. There was a slight return of the griping sensation at bed-time. He repeated the anodyne himself, and rested well during the night.

On Thursday, the 30th, he arose as usual and commenced attending to his horses. On crossing the yard, I found him lying on a box in the stable, and upon inquiry he informed me that since getting up he had experienced severe pain around and below the umbilicus. I directed him to go to his room immediately, and just as he was passing from the stable to the stairway leading to his room, he was seized with the most violent agony resembling a spasmodic pain, just below the umbilicus, extending low down towards the pubis. The agony was so intense that it caused him to flex his thighs upon the pelvis, and draw the body forcibly forward. He was carried to his room immediately, and I gave him twenty grains of calomel with three grains of opium, and applied a mustard poultice to the abdomen. This was about half-past seven o'clock, A.M.

When I returned at 11 o'clock, I found him still in extreme agony, with occasional hiccough, and eructating dark-green fluid. I administered ½ gr. morphine, and gave an enema of strong salt and water. The enema passed off immediately without any fæcal matter. I permitted him to inhale chloroform until relaxation and sleep were produced; the chloroform was repeated in the course of two hours. In all he had about four hours comfortable sleep.

7 P.M.—Not so much pain, but extreme tenderness on pressure just above and below the umbilicus. Applied a blister 7 by 8 inches over the seat of pain, and gave a powder every two hours, composed of 5 grs. calomel, 1 gr. opium, and ⅓ gr. ipecac. During the paroxysms of intense pain, the pulse became quick and small, but resumed a more natural character when the pain subsided. Eructated during the night, the same dark, green fluid; with this exception, he rested comfortably; no action from the bowels; no vomiting; no nausea.

Friday, 31st, 6 A.M.—Pulse quick, frequent, and not full. Blister drawing well. Continues to eructate large quantities of dark, dirty, green fluid—no stercoraceous odor. Tenderness on pressure over the umbilical region. Respiration rather labored; the shoulders are elevated in inspiration with more force than under ordinary circumstances. No swelling of the abdomen; no tympanites. Made an attempt to give a cathartic mixture, but it was rejected immediately—gave another enema.

11 A.M.—Removed the blister which had drawn well. Enema had not come away; removed a portion of the cuticle from the blistered surface and applied a dozen leeches; eructation of dark, dirty, green fluid still continues. Pulse quick; perspires freely; skin of the normal temperature; leeches draw well; applied a large emollient poultice over the blistered surface. Although respiration is labored, still the abdominal muscles play freely to a considerable extent.

1½ P.M.—Another enema of salt and water with the addition of castor oil. It came away in fifteen minutes with some flatus and a small portion of fœcal matter, not, however, of such a character as to lead to the impression that it came from the small intestines. Some increase of pain after the action of the enema, which operated again at 2 o'clock, the discharge presenting the same characters as the first.

4 P.M.—Eructations have continued—the kind brought up of the same character; no return of pain; pulse 155 per minute, and feeble. ℞ creosote gtts. 20, morphine sulphas gr. $\frac{1}{4}$ muc. gum arabic ʒ ii. Mix. —A teaspoonful every half hour; and a wineglass of champagne every half-hour.

8½ P.M.—Skin commences to be cold and clammy—pulse still more frequent, small and feeble; restless; no pain; respiration more labored —all the indications of a speedy collapse. Eructations not so frequent, but a larger quantity of fluid is brought up each time. Continue creosote—substitute brandy and water for the champagne.

Saturday, Sept. 1, 2 A.M.—Continues to sink; fluid eructated emits a stercoraceous odor; dejection similar in character to the fluid eructated; return of pain; intellect perfectly clear. He expired at half-past 5 o'clock A.M. Post mortem about four hours after death. On opening the abdominal cavity, extensive traces of peritoneal inflammation were observed in every direction. The cavity contained a large quantity of sero-purulent effusion; there were adhesions between the omentum and intestines, and between the convolutions of the intestines themselves, and other viscera. Extensive deposits of plastic lymph were found at numerous points, and some marks of tuberculosis were observed in the liver and mesentery, evidently of old date.

On examining the region of the cœcum, it was found that an abscess, which implicated the appendix vermiformis, had given way, and discharged its contents into the peritoneal cavity. The appendix had become so thin at its juncture with the abscess, that it was completely ruptured across at that point. A substance larger than a pea was found in the abscess. It was soft—that is about the consistence of old cheese—and of a yellow, gray color. Its precise nature could not be ascertained; it was evidently some portion of the undigested or undigestible aliment which had found its way to the bottom of the appendix, where the consequent irritation produced an adhesion between the walls of the abdomen and the appendix. The extremity of the appendix was incorporated with the condensed and thickened cellular tissue, which formed the walls of the abscess. It had doubtless been of long standing—probably more than a year—and the gradual thinning of the parietes produced a rupture, which led to a rapid and fatal peritonitis. The cavity of the pelvis was completely lined with a false membrane, which could be stripped off like the oiled paper from adhesive plaster. From the time the eructations commenced, to that of his decease, he must have brought up, at the smallest calculation, two gallons of the dark, dirty, green fluid alluded to above.

I would merely remark that this is the third case of this singular and fatal disease that has occurred in my practice, which covers a period of twenty-six years. The first case occurred in 1847, a report of which may be found in the 4th volume of your Journal, at page 180. The report states, "On opening the abdomen and exposing the viscera, we found the omentum covered with pus. The small intestines with the omentum were then turned back from their position, when we discovered that a cœcal abscess had burst into the abdominal cavity. Several

adhesions were found between the liver and walls of the abdomen. The pus from the abscess was extensively diffused throughout the abdominal cavity. There existed marks of extensive peritoneal inflammation. The appendix vermiformis, the coats of which were entirely destroyed by the ulceration at one point, appeared to have been filled with a substance resembling old cheese, a portion of which had escaped with the pus into the abdominal cavity. There were, also, two openings in the cœcum, nearly large enough to admit the end of the little finger." The second case occurred in 1849, in a young gentleman from the North. His symptoms were severe and rapidly fatal. On examination, (post mortem,) an abscess was discovered in the cœcum, which had become adherent to the posterior part of the abdominal walls, a large amount of pus escaped into the peritoneal cavity, producing extensive peritonitis, which was speedily fatal.

In this case, the appendix vermiformis was not implicated in the abscess, but it was nearly obliterated, and presented nothing more than a mass of condensed tissue, without any opening into the cœcum. In the case which is the subject of the present report, the cœcum appeared to be perfectly healthy, and the abscess was confined entirely to the lower portion of the appendix, at the point of its adhesion to the posterior part of the abdominal wall.—*Charleston Med. Jour.*

Ununited Fractured Rib—successfully treated by an Operation. By Prof. Paul F. Eve, M.D., of Nashville, Tennessee.—On the 11th of last November, 1854, I operated before the Class of our University upon Mr. Wm. Briant, of Bledsoe county, East Tennessee, who some two years before had received an injury by a fall, having at the time a heavy burden on his shoulder. The result was a fracture of one or more ribs; and he came to our college clinic on account of a continual discharge of pus from sinuses situated over the eighth rib of the left side, a little anterior to its middle.

The patient with this exception enjoyed good health, was a stout, active, laborious man, and possessed an excellent constitution. A probe introduced into the sinuses having detected denuded bone, it was proposed to convert the issues into one by an incision which would also expose the true condition of the diseased parts. No looser portion was found, but the fractured extremities of the ribs were enveloped in an abscess, and removed with stout forceps; the wound was dressed, leaving a tent made of patent-lint at the bottom, with adhesive plasters.

The broken ends of the ribs were twisted off with strong forceps, instead of employing cutting instruments for this purpose.

A few days after the operation, the patient returned home with injunctions to wear the tent deep in the wound, so that it might act as a seton for several months between the broken ends of the bone.

The 10th of June, 1855, seven months after he left Nashville, Mr. B. wrote me, that "the side you operated upon last November is sound and well, and I enjoy fine health, and can work and attend to my business as heretofore." Two months later, in August last, my

colleague, Prof. Watson, examined the case, found it as represented by the patient himself, and pronounced it perfectly healed.

It is probable a seton between the fractured ends of the rib might have produced the same happy result.—*Nashville Jour. Med. and Surg.*

Case of Simultaneous Ligation of the Common and Internal Carotid Arteries. By GURDON BUCK, M.D., Surgeon to the New York Hospital.—Wm. McGraw, a laboring man, aged 30 years, and a native of Ireland, was admitted July 5, 1848, into the Hospital with a deep wound in the right parotid region, that happened the day before, from the explosion of a glass bottle containing gunpowder. The patient was holding the bottle at the time of the accident. The hæmorrhage, which was profuse, was arrested with much difficulty by sewing up tightly the external wound, after first extracting a fragment of glass one inch in length. The upper part of the neck and cheek, surrounding the wound, were a good deal swollen and tense. The wound itself was scarcely half an inch in length, and was situated half an inch anterior to the lobe of the ear. After enlarging its orifice, the finger passed directly inwards behind the ramus of the jaw, a depth of nearly two inches, and could be moved about with some freedom at the bottom of the wound. No hæmorrhage followed the exploration. The patient's mouth was drawn towards the left side, and much distorted. Deglutition was difficult, and his voice, hitherto distinct, was thick and not easily understood. Patient was directed to keep in bed, and to have cold water dressings applied to the part.

July 8.—On careful examination, the swelling, which had increased, presented a distinct pulsation at its central and most prominent part, showing conclusively the development of a false aneurism.

9th, at 4, A.M.—A very profuse hæmorrhage occurred, which could not be controlled by pressure over the wound, but was finally arrested by very firm compression applied to the common carotid. After being kept up by the Resident Surgeon and his assistants for nearly two hours, compression with sponge in the wound was substituted, and applied in the following manner. Three pieces of compressed sponge were successively passed down into the cavity of the wound, and a fourth placed over the orifice. Two graduated compresses were applied over the sponges, and the whole maintained in place by the finger of an assistant. The patient was thus relieved of the painful pressure over the neck, and time was allowed to convene the Surgeons for an operation.

Operation at 9, A.M.—For reasons that will be stated hereafter, it was decided to apply a ligature to the internal as well as the common carotid artery. The procedure was as follows:

An incision three inches in length was made from a point a little above the ramus of the os hyoides downwards over the edge of the sterno-mastoid muscle. This muscle being laid bare, its anterior edge was raised from its sheath and drawn outwards. A transverse venous branch that crossed the carotid at the point where it was to be tied,

was secured by two fine ligatures and cut between them. The sheath of the common carotid was next opened; and a ligature passed beneath the artery, but not tied. The dissection was now carefully prosecuted upwards to the bifurcation, and the internal carotid exposed to the extent of three-fourths of an inch from its origin. In the first attempt to pass the armed needle under the artery, the patient became suddenly convulsed, his breathing stertorous, and his pulse feeble, evidently from disturbance of the pneumo-gastric nerve. Further proceedings were suspended, to allow these alarming symptoms to subside, which required five or six minutes. A second attempt to pass the ligature was then successful without any accident. Before tying the knot, a careful examination was made to ascertain that nothing was included in the ligature but the artery. The effect of cutting off the current of blood from the brain was also tested, by tightening the thread over the finger placed in the noose with the artery. The ligature was then tied in the usual manner, and that around the common carotid was also secured an inch below its bifurcation and above the omohyoid muscle. The external wound was closed with sutures, and between them strips of muslin wet with collodion were applied. Ice-water dressings were directed.

July 11th.—Patient is progressing favorably; his pulse is one hundred, full and strong. The swelling of the parotid region has diminished. Pus mixed with blood is freely secreted from the original wound. 14th.—The swelling has still further subsided, and the suppuration from the original wound very much diminished. 20th.—The ligature has come away from the internal carotid. No pulsation is perceptible either in the facial or temporal arteries of the right side. 21st.—The ligature came away from the common carotid.

Aug. 5th.—Patient has complained, for the last four or five days, of severe pain over the right side of the head and face, anterior to the ear, and has had frequent slight hæmorrhage from both nostrils. The wounds have nearly healed. No excitement of pulse. Ordered cups and scarifications to the temples. 12th.—Since the last report, blisters have been applied behind both ears, and with decided relief of the pain in the head. The epistaxis has recurred but once, and only in a slight degree. His bowels are constipated. 14th.—The pain in the head has returned this morning with great severity. Constipation still persists, in spite of active purgatives. Ordered a blister to be established on the forehead with aq. ammon. fort.; and croton oil, gutt. ij. to be taken, and followed by enema, if necessary. 15th.—The head is much relieved. The bowels have been freely evacuated. The blister to be continued behind the ear. 26th.—The patient's general condition is improving; his bowels, however, still continue obstinately constipated, and require the most active purgatives to move them. The wounds have not yet entirely healed; that in the parotid region is converted into a fistula, from which saliva flows freely, especially during the act of mastication. The mouth, when opened, is still drawn to the left side; the right half of the tongue has become atrophied and flabby, presenting longitudinal wrinkles on its surface. Its appearance

strangely contrasts with that of the left half, which retains its natural plump and healthy condition.

Sept. 21st.—Every thing continued to progress favorably till this morning, when patient became feverish, and sick at his stomach. During an effort to vomit, he was suddenly startled by a gush of arterial blood from the wound in the neck, amounting to about two ounces. Before assistance could reach him, the hæmorrhage ceased spontaneously.

Oct. 18th.—No return of hæmorrhage. The salivary fistula noticed above has closed under the influence of pressure applied with the end of the finger to the orifice of the fistula during meals. Patient was discharged cured this day.

Several months afterwards, when he presented himself for examination, the right half of the tongue was still found atrophied and shriveled, though the function of taste remained unimpaired. The mouth was drawn to the left side, distorting the face. His articulation continued thick and indistinct.—*N. Y. Med. Times.*

Case of Remarkable Extra-Uterine Conception. By Dr. Armsby.—The specimen from which the following illustrations were taken, was obtained at a post mortem examination, held by Dr. Parkhurst, in the presence of about twenty persons, upon the body of Mrs. Amos Eddy, aged 77, of Frankfort, Herkimer co., N.Y. Mrs. Eddy's maiden name was Rebecca Smith. She was born in Frederickstown, Columbia co., N. Y., in the year 1775. Her parents were born in England. Her mother, Sarah Smith, gave birth to twenty-four children, of whom four pair were twins; Rebecca being the twelfth child. Mrs. Eddy was married in New Lebanon, Columbia co., N. Y., in 1795, at the age of twenty, and removed with her husband, Amos Eddy, to Frankfort, Herkimer co., N. Y., where they both lived and died; he at the age of seventy, and she at the age of seventy-seven; she became pregnant in 1802, seven years after her marriage, and died in 1852, carrying the fœtus fifty years.

No unusual symptoms attended her pregnancy; her catamenia ceased, quickening was felt at the usual time, and the motions of the child increased were observed during the usual period of pregnancy. At the expiration of eight and a half months, she had severe labor pains, following a sudden fright from the falling of a vessel into the fire while she was engaged in cooking. Her physician, Dr. Farewell, of Litchfield, was called; the labor pains continued for several hours with regularity and force, but at length subsided; and she remained comfortable for two or three weeks. Her health then began to decline, and the full period of pregnancy having passed by, her friends became extremely anxious, and availed themselves of the advice of Drs. Guiteau, Hull, Coventry, White, and others. For a considerable time she was confined to her bed, and after a year and a half of extreme suffering, her health began to improve, and was finally restored; during the remainder of her life she had general good health, but suffered occasionally from severe attacks of pain in the abdomen, which re-

sembled labor pains. After her health was restored, her catamenia returned and continued until the age of forty-five. She traveled much about the country, and consulted various medical men, among others the late Prof. Willoughby, of Fairfield Medical College; her health continued remarkably good up to the time of her death, and at the age of seventy-six she was accustomed to walk five miles from her residence to the village and back again.

The specimen with its covering cyst weighed 8 pounds at the time of its removal. The external surface of the envelope was smooth and white, composed of concentric layers of fibro-cartilage, varying at different points, from a line or two to three-fourths of an inch in thickness. It had no connections with the abdominal viscera or walls, but was slightly attached to the fallopian tubes and omentum. The external surface of the fœtus, was encrusted with earthy substance, of sufficient thickness to preserve its form when dried. The interior seems to be a soft substance, resembling adipocire.—*Trans. Med. Soc. State N. Y.*

On the Use of Elm Tents for the Dilatation of the Cervix Uteri. By H. R. Storer, M.D., Physician to the Boston Lying-in Hospital. —The expansibility, to a certain extent, of slippery elm, is well known. This extent is indeed inferior to that of sponge; but if the bark be of good quality, upon which much depends, it will generally be found sufficient for every practical purpose.

I have stated my conviction that the danger of sponge lies, not merely in the extent to which it will expand, but also in the celerity with which that force is exerted. This also exists to a less degree in the elm, a tent of which will not be found increased to its full size within three or four hours after its introduction, as is often the case with sponge; but in very many instances this rapidity is not necessary. In most cases, indeed, I consider it unsafe—unsafe at any rate for the os to be suddenly dilated, from a comparatively closed state to its full patency in so short a time. The tissues are generally by no means prepared for so sudden a change; and when effected, it can hardly be compared to what takes place during the first stage of natural labor: in the case under consideration, the stimulus being entirely from below, entirely confined in its action to the cavity of the cervix and its extremities, entirely unconnected with anything at all resembling the end of gestation—which indeed could only be imitated by the descent of so large a polypus, fibrous or otherwise, as to render the use of sponge tents wholly out of the question. In most cases requiring a tent, great haste is not necessary; in some cases it is decidedly contra-indicated; in many, other things being equal, elm bark has the advantage over sponge.

Furthermore, I need not dwell upon the fact that the elm tent, on its withdrawal from the vagina, though it may have become somewhat impregnated with a sufficiently disgusting odor during its impaction among the several secretions, will yet be found not to have itself taint-

ed them. In this respect, also, I have noticed a marked superiority over sponge.

But to such apparently negative excellence, there seems to be added other, sufficiently positive in its character. I allude to the abundant mucilage poured forth from the cells of the elm, and which, by affording a perfect sheath to all irritated or diseased surfaces, must lessen the danger so peculiar to sponge; while on the other hand it supplies, to a certain extent, any deficiency that may, as often, occur in the normal secretion of the parts, necessary in furtherance of the process of expansion.

I might go on to point out other, though less important advantages, but do not consider it necessary. I do not desire to claim for these tents that they should always take precedence, or should indeed become generally substituted for sponge; such claim would be unjust to both. Nor, on the other hand, do I expect that all who may be induced to make trial of them, will give them their unqualified approbation. Much will depend upon the manner in which they are prepared, and the quality of the material itself. In size, shape, and mode of introduction, they should closely resemble the sponge tent, with which, as I have already said, I shall take for granted that my reader is familiar. Upon these three particulars, of course, success or failure will in a great measure depend.—*Boston Jour.*

Statistics of Mortality in Norfolk and Portsmouth, during the prevailing Epidemic.—It has been estimated that the population of Norfolk, which is usually about 14,000, has been reduced by flight to not more than 8,000 persons, whilst in Portsmouth, with an average of 8,000 inhabitants, it is supposed that probably 4,000 have remained. The number of deaths in Norfolk to the 20th of September have been not far from 1,400, whilst in Portsmouth it is estimated that 700 have died from the disease. Thus, in 12,000 persons, we find a loss of 2,100 from the ravages of this awful scourge. Yet, even with this fearful exhibit, the disease is not satisfied, for daily victims are being added to the mournful list.

For the sake of comparison, let us turn to the admirable tables of Dr. La Roche, in his late treatise on yellow fever, and we see that even this malignant visitation has been exceeded in the ratio of deaths to population. Thus,

In Palma, 1821—The remaining population being just that we have allowed to Norfolk and Portsmouth, i. e., 12,000, the number of deaths were 5,341.

In Gibraltar, 1804—With a population of only 10,000, the mortality was more than *one-half*, the number of deaths being 5,946, whilst in the epidemic of 1821, at Barcelona, of 830 patients entered at the General Hospital, *all died* but 81!

The following are the names of the forty physicians who fell victims:—Sylvester, Constable, Halson, Sylvester, Jr., Higgins, Briggs, Upshur, Tunstall, Selden, Burns, Trugien, Parker, Lovett, Walters,

Thompson, Fliess, Booth, Howe, Bache, Dillard, Gooch, Howle, Gelbardt, Blow, Jackson, DeBerane, Obermuller, De Capry, Hunter, Schell, Craycroft, Mierson, Handy, Cole, Morse, Rizer, Smith, Marshall, Craven, Berry.—*Virginia Med. and Surg. Journal.*

Opiate Inhalations in Neuralgic Pains.—Take two grains each of powdered opium and sugar, also gum benzoin if desired, which sprinkle upon a hot shovel held under the patient's nose. It will afford prompt relief in coryza, with pain in the frontal sinus, as also in the various neuralgic pains of the frontal, temporal, and zygomatic regions, whether of an idiopathic or symptomatic nature.—*St. Louis Med. Jour.*

EDITORIAL AND MISCELLANEA.

Medical Journals—Should the Young Practitioner Read them?—A well-regulated medical periodical is the medium of communication of the experience, thoughts, and reflections of medical men to one another, and of the important discoveries in the different departments of medicine. They supply on a large scale, in a certain degree, the place of societies and associations for improvement, by affording the members of a profession, widely-scattered, a medium for the rapid interchange of views, and for the discussion of principles and methods of practice. While activity in the cultivation of the various branches of medicine is necessary to their healthy existence, they reciprocally tend to stimulate the growth and development of these branches, by the wide diffusion of recent discoveries among earnest laborers in these fields of research.

A serial publication thus becomes, not only a record of the progress of medical science, but also a great repository of facts, valuable for future study. It is the inexhaustible store-house, from which the compilers of practical treatises obtain the materials for their works.

The high-toned liberal and independent medical periodical is essential, also, to the ethics of the profession. It creates and maintains a sentiment adverse to the petty jealousies and envious strifes, which too often arise between individual members, and totally subversive of all the low arts by which the charlatan imposes upon public credulity.

But the laborious country practitioner can best appreciate the well-regulated periodical. Isolated from all professional associations, he is deprived of the satisfaction of communicating his doubts and perplexities to others, and from mutual discussion deriving light and assistance. His position affords him but limited advantages and time for study and careful investigation; while, from the instructive field of pathology he is entirely debarred. To this large and most respectable class, the medical press is a desideratum. It brings them in close communication with their brethren, scattered over the civilized world, and makes them participants of whatever learning, research, or experience can afford. It spreads before them, for contemplation, the precepts of the public teachers of their profession the discoveries of

the microscopist and pathologist, and the experience of the hospital physician and surgeon.

We are led to these remarks by the annually repeated advice of a prominent medical teacher, to his graduating class, never to read medical periodicals. "If you have leisure," he is accustomed to say, with characteristic emphasis, "and must read, select novels instead of medical journals, for your instruction."

We can best prove the injustice of this slur upon medical journals, and show its ill effects upon the young practitioner who has the simplicity to follow it, by making an extract from a letter just received from a young physician, located in the interior of an adjoining State. He says, "I settled in this place about two years since, under the shadow of an old physician, who had long monopolized the practice of the town. During the first year and a half I had nothing to do; but, undaunted, applied myself diligently to a careful review of my studies, and the perusal of the best medical periodicals. The opportunity finally offered for me to apply my knowledge to good account. I was called to visit a young man with a dislocated femur, which the old physician, my rival, had in vain attempted to reduce with pullies, after torturing the patient several hours, to the horror of the bystanders. Before visiting the patient, I carefully reviewed the admirable, and to me invaluable paper of Dr. Markoe, in the *N. Y. Journal of Medicine*, on reducing the dislocated femur by manipulation. I found the patient and friends alarmed, and fearful of having instruments again used. I placed him in the proper position for manipulation, and, in the presence of a multitude of bystanders, began the required movements of the limb. Without causing the slightest pain, I carried it through the proper circle, and was about to bring it down, when the head slipped gently into its socket, to the great relief of the patient, and the satisfaction of the friends. I need hardly add, that within one month of that operation, I had all the business I could do."

We could exhibit many other facts of a similar nature, from our correspondence, illustrating the importance of medical journals to the practitioner, but it would be a supererogatory task. Their value is indisputable to every lover of his profession, and it is to this class we address ourselves.

Dislocations of Femur Reduced by Manipulation in London Hospitals.—The London Medical periodicals have recently contained reports of cases of reduction of dislocations of the femur, by manipulation. The first cases, two in number, occurred in Guy's Hospital, (*Lancet*, July 7,) under the care of Mr. Cock; one was of five weeks standing, the other more recent; both had been subjected to the pullies. The reduction was easily effected in both cases by manipulation. The reporter adds, "from a careful study of the skeleton, Mr. Cock finds the secret to be, to handle the femur as if it were the humerus; then flexing it on the pelvis, abduct strongly, thus lifting the head of the bone with the accessory band of the ilio-femoral ligament, over the

acetabulum, while you also rotate the lower condyle or limb, in your hand outwards."

In the *Lancet* for Aug. 4, we find another report from Guy's Hospital, of seven cases under the care Mr. Birkett, four of which were reduced by manual extension, and three by flexing the thigh upon the pelvis, abducting and rotating it. Of the three latter, two were in the foramen ovale and one in the ischiatic notch. The writer makes the following introductory remarks :—" Dr. Reid, of New York, also gives an American plan of reduction in cases of dislocation of the head of the thigh-bone ; and Dr. Markoe, one of the attending surgeons of the chief N. Y. Hospital, has recently furnished nine cases of his own, and three others treated by New York surgeons, twelve cases in all ; of which three were dislocations into the foramer ovale, eight, (five of his own and three of others,) on the dorsum ilii, and one into the ischiatic notch. We do not hear of the luxation on the horizontal branch of the os pubis, or the still more rare accident behind the tuberosity of the ischium. The method of the American surgeons is much more violent, and not more effective, than that adopted at Guy's and at some other London hospitals, the displacement being remedied, according to the former, " by flexing the leg on the thigh, carrying the thigh over the sound one, upwards over the pelvis, as high as the umbilicus, and then abducting and rotating it." A peculiar " rocking motion " is much dwelt on, however, by our transatlantic brethren, as necessary to induce the head of the bone to regain or creep back to its normal position,—a plan spoken of by Colombat—an old modification of the present methods by manipulation, also now highly prized by some surgeons ; but we doubt if, under chloroform, the patient could be so well adapted to it as in the plan of Mr. Cock, and Mr. Birkett at Guy's, which seems to answer all purposes."

If the writer of this report will carefully examine the valuable paper of Dr. Reid, in the July, 1853, number of the *New York Jour. of Med.*, he will learn that the " American plan," or the method of Dr. Reid, is *entirely destitute* of violence. Dr. R. even deprecates the employment of chloroform, as " the pain produced by manipulation, is too trifling to require an anæsthetic of any kind." His third proposition if followed, effectually prevents all violence :—" The general rule for reducing dislocations should be, that the limb or bone, should be carried, flexed, or drawn, in that direction which will relax the extended muscles."

Dr. Markoe's experience confirms this view ; he says " we never have accomplished anything by proceeding in a direction where great force was required to continue the movement, but have always succeeded by finding a direction in which the mere continuance of the movement without force, has brought the head into the proper position."

In the " American plan " again, the " rocking motion " has no existence. Dr. Reid speaks of " making gentle oscillations of the thigh," and condemns the rocking motion mentioned by Dr. Markoe.

In the present number of this journal, we supply the deficiency in

the history of this operation alluded to by our London contemporary. The two cases of dislocation upon the pubes, reported in our original department, by Dr. E. J. Fountain, of Iowa, are extremely interesting, and their successful treatment by manipulation alone, reflects great credit upon this ingenious and accomplished surgeon. The warmth of Dr. Fountain's praise of this great improvement in practical surgery, and his acknowledgment of Dr. Reid's merit are appropriate. We can well imagine the degree of estimation which the isolated practitioner must place upon a method of treatment of one of the most formidable accidents in surgery, which allows him to dispense with pullies, cords, bandages, anæsthetics, a half-score of assistants and enables him, with facile hand to accomplish in twenty seconds, without pain, what before, with all these trappings, required hours, and even then often failed.

We deem it our duty to make this allusion to the negligence of foreign writers to accord to American surgery its proper due. It matters nothing how many times luxations of the femur have been accidentally or deliberately replaced by manipulation; to Dr. Reid belongs the unqualified merit of *first* establishing, by actual demonstration of its principles, the proper method of procedure. However much Mr. Cock, of Guy's Hospital, may have studied the skeleton for "the secret," he has not discovered a plan of reducing dislocations of the femur superior to the American. The first intimation of this method of operating, though not acknowledged, we doubt not was derived by the London surgeons, from the paper of Dr. Markoe, in the *New York Jour. of Med.*, for January 1855, which was soon after republished in England.

College of Physicians and Surgeons. Resignation of Professor Stevens, *as President of the College.*—At a meeting of the Trustees of the College of Physicians and Surgeons in the City of New York, held at the College on the 27th November, 1855, the following resolutions were unanimously adopted:—

Resolved, That this Board deeply regret the Resignation of Dr. Stevens as their presiding officer.

Resolved, That the interest he has uniformly shown in the welfare of the College, his incessant vigilance in watching over its affairs, and the earnest zeal with which he has either originated, or forwarded every improvement in its organization, have secured to him the respect and good-will of this Board, over whom he has so long presided.

Resolved, That, cherishing these sentiments toward their late President, the Board is unwilling to part with him, without expressing their continued interest in his welfare, and the hope that he may realize in retiring from public life, the peace and happiness, which he has so richly earned in a long life of professional eminence, and active exertion for the good of his profession and the public at large.

Coroners' Inquests.—At the last Annual Meeting of the National Medical Association, held in Philadelphia, the undersigned was ap-

pointed Chairman of a Committee to report what "measures should be adopted to remedy the evils existing in the present methods of holding coroners' inquests."

I think it very desirable, nay necessary, to obtain data, such as the laws regulating inquests, forms of procedure, fees paid to medical experts, the qualifications and tenure, and other matter appertaining to the office of coroner.

Any suggestion, cases of flagrant abuses, documents, reports, etc., will be most thankfully received and duly acknowledged.

ALEX. J. SEMMES, M.D.,
WASHINGTON, D. C. Chairman of Committee on Coroners' Inquests.

The Stethoscope and Virginia Medical and Surgical Journal Combined.—By the last issues of these respective Journals, we learn that a combination of the two Journals will take place with the commencement of the present year, under the name of the *Virginia Medical Journal.* The editorial corps of this new Journal consists of the editors of the late *Virginia Medical and Surgical Journal.* Under the new arrangements, increased efficiency and usefulness must result to the profession of Virginia. We wish the new Journal all success.

Journal of Public Health, and Sanitary Review. — We have received the first three numbers of this interesting Journal. It is ably edited by B. W. Richardson, M.D., and published by Samuel Highly, of Fleet-street, London. We announce to our medical brethren, on this side of the Atlantic, the appearance of this Journal with feelings of no ordinary pleasure. It is established for the purpose of forwarding the great principles of sanitary reform, which now agitate the public mind of all enlightened countries, and particularly that of England. It publishes the transactions of the Epidemiological Society of London, and is worthy of a place in the library of every intelligent physician.

Card of the Committee on Prize Essays of the American Medical Association.—At a meeting of the American Medical Association, held in Philadelphia, May, 1855, the undersigned were appointed a committee to receive voluntary communications on medical subjects, and to award prizes in accordance with the regulations of that body.

Each communication intended to compete for a prize must be addressed to the Chairman of the Committee, at Ann Arbor, Michigan, before March 20th, 1856, and must be accompanied by a sealed packet, containing the name of the author, and marked, exteriorly, by a sentence or motto corresponding with one upon the essay, which packet will not be opened unless the essay belonging to it is successful in obtaining a prize.

Unsuccessful papers will be returned, on application after the adjournment of the meeting of the Association, in Detroit, in May next.

A. B. Palmer, M.D., (Chairman), Samuel Denton, M.D., A. R. Terry, M.D., A. Sager, M.D., S. H. Douglass, M.D., C. L. Ford, M.D., E. Andrews, M.D.